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1981
HOUSING STUDY
NORTH COAST AREA
PACIFIC SOUTHWEST REGION
FOREST SERVICE

by:

DALE TRAIL
PROGRAM ANALYST

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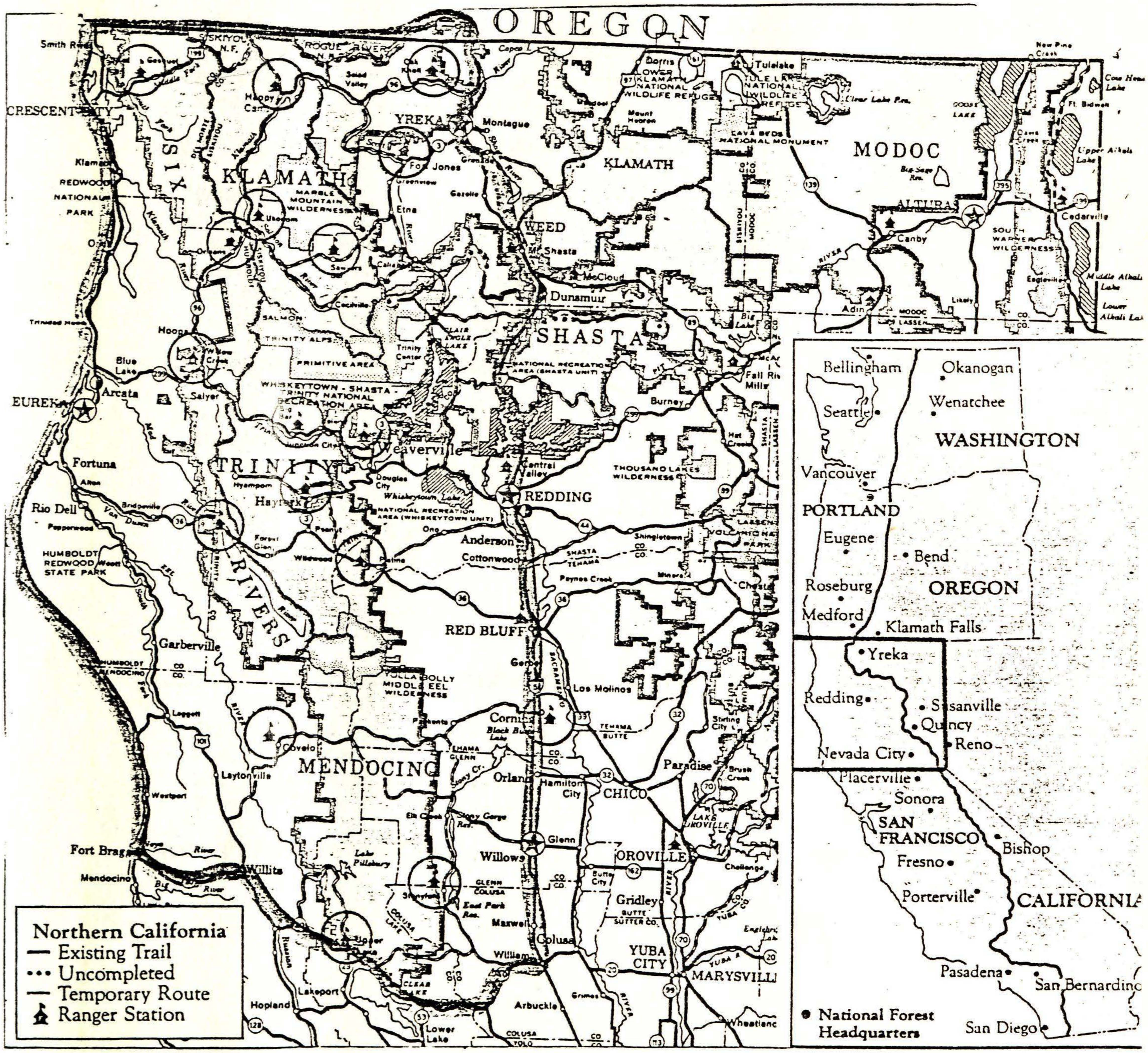
MAP of 1981 HOUSING STUDY AREA


OREGON
SISKIYOU N.F.
ROGUE RIVER N.F.
CRESCENT CITY
SIX RIVERS
KLAMATH
MARBLE MOUNTAIN WILDERNESS
YREKA
Montague
Fort Jones
Etna
WEED
Shasta
McCloud
Dunsmuir
LOWER KLAMATH NATIONAL WILDLIFE REFUGE
Tulelake
TULE LAKE NATIONAL WILDLIFE REFUGE
LAVA BEDS NATIONAL MONUMENT
MODOC
ALTURAS
Canby
Cedarville
SOUTH WARNER WILDERNESS
Adin
REDWOOD NATIONAL PARK
Hoopa
SALMON TRINITY ALPS PRIMITIVE AREA
SHASTA
Trinity Center
CLAIR ENGLE LAKE
NATIONAL RECREATION AREA (SHASTA UNIT)
Burney
Fall River Mills
EUREKA
Arcata
Blue Lake
Salyer
WHISKEYTOWN - SHASTA - TRINITY NATIONAL RECREATION AREA
Weaverville
TRINITY
Fortuna
Rio Dell
Hayfork
Douglas City
Whiskeytown Lake
REDDING
Central Valley
THOUSAND LAKES WILDERNESS
HUMBOLDT REDWOOD STATE PARK
Anderson
Cottonwood
Shingletown
LASSEN VOLCANIC NATIONAL PARK
Platina
RED BLUFF
Garberville
YOLLA BOLLY MIDDLE EEL WILDERNESS
Los Molinos
Corning
Covelo
MENDOCINO
Laytonville
Westport
Orland
Hamilton City
CHICO
Paradise
OROVILLE
LAKE OROVILLE
Fort Bragg
Willits
Mendocino
Willows
Stonyford
Gridley
Upper Lake
Colusa
Williams
YUBA CITY
MARYSVILLE
Lakeport
Hopland
Lower Lake
Arbuckle
Wheatland
Northern California
— Existing Trail
••• Uncompleted
— Temporary Route
Ranger Station
Bellingham
Okanogan
Seattle
Wenatchee
WASHINGTON
Vancouver
PORTLAND
Eugene
Bend
OREGON
Roseburg
Medford
Klamath Falls
Yreka
Redding
Susanville
Quincy
Reno
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INTRODUCTION

The purpose of this housing study is to make recommendations for improving the Forest Service's ability to recruit and retain personnel in the North Coast Area of the Region (West of Interstate 5 and north of Clear Lake). These improvement recommendations were to come from an indepth review of several existing studies, current policy, existing situations, major influencing factors, projected workloads and our processes and systems. Forests and Districts were to be impacted as little as possible.

There are on-going changes involving certain units in the study area that may change the relevance of this report, e.g., the Klamath re-organization review. It is also important to recognize that projected information displayed can be different if we change from the current situation, e.g., our distribution of FTE's to the various ADVENT elements may be out of balance and by adjusting them, the projected needs in future years would be different.

There are some aspects of this report that have Regional, inter-regional and perhaps national implications. A copy of this report will be distributed to each Region and to the Washington Office for their information and use.

This report is organized around the five objectives described in the Study Plan (See Appendix 1). Many people were contacted during the data collection process. See Appendix 15 for a partial list.

EXECUTIVE SUMMARY

The objective of this summary is to provide a brief overview of the conclusions and recommendations that will display the essence of this report. In-depth rationale behind specific recommendations are found in the text of the report. Specific discussions of each recommendations are given in the Analysis of Recommendation section that includes positive and negative consequences, level of implementation, cost items, staff involvement and other consideration.

Conclusion: There is a need to more clearly state Regional (and perhaps National) Policy related to meeting building design standards, what is to be considered adequate and acceptable housing and to provide positive direction for managing facilities that no longer serve their intended purpose.

> Recommendation #1: R-5 Supplement to FSM 7314. 1) Requires documentation of decisions about facilities that are outside the guidelines. 2) States that mobile (modular) facilities are adequate and acceptable.
>
> Recommendation #2: Engineering prepare guides for "x-rating" a facility. R-5 Supplement to FSM 6445.03 that requires an action plan to accompany "x-ratings."

Conclusion: In order to meet organizational mission and goals there will be a continuing need to staff remote stations. Organizational and employee needs will be better served when people are induced to serve at a remote location rather than directed to serve. There are yet a few unexplored possibilities that the agency might use as inducements.

Recommendation #3: Assist employees in building equity. a) Provide official housing information referral activities; b) Provide/guarantee low interest rate loans to employees; or Government construction/purchase with lease/purchase option; c) Financial allowance for purchase of mobile facility that meets higher Forest Service specifications; d) Provide official financial counselling.

Recommendation #4: Institute & honor a regional "assignment" agreement system for selected remote locations.

Recommendation #5: Provide emergency medical technician services at selected remote stations.

Recommendation #6: Mitigate adverse effects of remote living on employees - a) Commissary; b) Pay mileage or use government vehicle for shopping; c) A remote location pay differential.

Recommendation #7: Require vacancy announcements to list family living situations, e.g., School, Shopping, Medical, Entertainment.

Recommendation #8: Obtain unconstrained authority and provide communal type ammenity facilities and equipment in selected locations.

Recommendation #9: Provide official job information referral services.

Recommendation #10: Hire spouses full time at selected remote locations.

Recommendation #11: Make demonstrated ability to build and maintain an appropriate management climate a selection factor for remotely located unit managers or hire special consultive skills for on site training until climate is established and maintained.

Conclusion: In the forseeable future it is doubtful that resource allocations will closely match the work needed to produce RPA targets. As different political factions come to power, we can expect widely fluctuating allocations to be the norm. The more flexible the agency is, the better it will be able to respond to and cope with these wide fluctuations. Building and maintaining fixed foundation facilities tends to reduce our flexibility.

Recommendation #12: Build adequate, attractive mobile home parks for ALL new residential facilities.

Recommendation #13: Eliminate all existing permanent (fixed foundation) family residential facilities at earliest practical time (no more than minor maintenance) in favor of mobile facilities (preferably employee-owned).

Conclusion: Many things like inefficiency, overlapping activities, lost resources, inappropriate decisions, poor quality, etc., occur when there are weak or non-existent linkages between the various systems used by an organization. In this Region (and perhaps nationally), our workforce planning process is an example of these weak or missing linkages. This starts with RPA/LMP targets, into ADVENT and budgets into workforce planning and recruitment, into PAMARS and the feedback necessary for the next cycle of work.

Recommendation #14: Adjust LMP and ADVENT elements to make them directly transferrable, one to another.

Recommendation #15: Workforce planning process based on 5-year ADVENT data that displays skills needed and an accurate skills inventory of the current workforce.

Recommendation #16: Report, accumulate and display skills used for making adjustments to future proposals.

Recommendation #17: Complete development of Work Quality Guides for functional work.

Conclusion: Our ability to accurately display and analyze the cost effectiveness of our programs and take definitive action to improve productivity, will become more important in the years immediately ahead. This is especially true of support programs where it seems easy to cut back and still meet targets over the short run. Such is the case of our total facilities program which includes leased, project-funded and FA&O facilities. Our current system does not permit accurate analysis.

Recommendation #18: Take steps to ensure we do not exceed the "point of diminishing returns" in the construction, operation and maintenance of our total facilities program.

EXISTING SITUATION
(OBJECTIVE #5)

GEOGRAPHY

The Coastal Range of mountains runs north-south through the entire length of study area with limited coastal plains to the west and the upper Central Valley and Shasta Valley to the east. River drainages are usually long and run through steep, mountainous terrain. Other than Interstate 5 on the east and Highway 101 on the west, roads are winding and fairly slow for traveling. Secondary roads are quite often gravel surfaced.

POPULATION

There are only rural communities within the study area (Urban being cities with 50,000 or more population and 100 or more people per square mile in surrounding area). The larger towns are located on the two main north-south routes (I-5 and U.S. 101). Many, very small unincorporated communities are scattered throughout the study area, usually along a major stream. Ten counties are within or partially within the study area. Most Forest Service stations are located in the unincorporated portions of these Counties, of which Shasta County has the most people with 69,300 (See Appendix 2) and Trinity County has the least people with 12,300 in the unincorporated areas. These ten Counties show an average of 2.7% annual increase in population over last 10 years in comparison to 1.7% for California and 1.1 for the U.S. (See Appendix 3).

The 1980 Census has projected population growth to the year 1990 (See Appendix 4). The average percent increase for the 10 counties is 25.3% in the 10-year period or a 2.5% annual increase. Given the limited private land base near Forest Service Ranger Headquarters, this indicates that obtaining housing from the private sector will be more difficult in the future for Forest Service employees.

INDUSTRY

The wood products industry (mostly lumber) is associated with all units in the study area as a major part of Forest Service activities. Outdoor recreation industry is also widely scattered through the area with some concentration points along the coast and lakes and major streams. Big Game hunting and stream fishing with some hiking in Wilderness areas and/or along the Pacific Crest Trail account for most of the dispersed recreation activity.

Commercial Fishing on the coast side and ranching/farming on the valley side constitute the other major industrial activities in the study area. With increased prices for precious metals and increased emphasis on energy, there is a corresponding increased interest and activity in mining. Mineral resources are widely distributed in the study area.

Marijuana is a significant cash crop in much of the study area. Although illegal to grow, many people are cultivating the plant. Very often these patches are located on National Forest land because of the isolation afforded and less risk of detection. As long as current laws and enforcement patterns exist, this industry is likely to continue to expand.

ECONOMY

The economy associated with the wood products industry is farily well depressed at this time. It accounts for a major portion of the total economy of the study area. This of course is related to inflation and high interest rates that have reduced housing starts to a very low level. The economies associated with the other industries are typical of those for California as a whole. The depressed wood products economy has forced lumber related workers to relocate and has made housing more readily obtainable by Forest Service employees in a limited number of communities in the area e.g., Crescent City and Hayfork.

FOREST SERVICE

There are some situations noteworthy of special discussion:

1. The not-so-legitimate, but thriving industry of growing marijuana in the mountainous study area has created some problems for Forest Service employees. In one case where the Forest Service is about the only regulatory organization around, the employees have become the target of adverse community attitudes. This has improved somewhat in recent months. It does not take very many people with special "Pot" interests to stir up adverse community reaction to the agency when the total community is farily small anyway. This potential will continue to exist in the future. The increased criminal activity associated with this industry is causing county and state officials more and more concern as the large amounts of money involved have been attracting "undesireable elements" into the rural communities.

2. The Ukonom R.D. headquarters is currently located on an unstable land mass and it is also intruding on an ancient cultural site. It is important that this headquarters be relocated in the near future. Facilities for housing district employees must be developed, either by the private sector or the Government, within a reaonable commute to a new district heandquarters location. Private land is very limited in this area except for Orleans.

3. The Salmon River District headquarters site capability will not adequately provide for employee housing to the extent needed to administer the district. Again there is almost no opportunity to secure housing from the private sector within the district boundaries.

   Decisons about 2 and 3 above are currently being formulated in the Klamath N.F.'s reorganization proposal.

   The Forests and Ranger Districts in the study area along with some relevant information for each, are shown on the attached chart.

   The size of unit factor (Col. 2) is based on the formula in the 1968 Study by the Management Sciences Staff, at that time part of Administrative Management Staff in the Washington Office. Personnel data (Cols. 5, 8,-11) came from the M.A.R.S. system. Supervisory data (Col. 6) came from organization charts. Housing Unit data (Cols. 12-24 came from the periodic printouts relative to quarters rental. The data in (Cols. 25-38) came from telephonic interviews with District Rangers or a long time district employee. Information in (Cols. 39-42) came from data in Appendix 5.

				EMPLOYEES (PERMANENT)							HOUSING UNITS @												
UNIT	UNIT SIZE FACTOR	1981 FTE ALLOC.	FTE/ SIZE FACTOR UNIT	TOTAL 5/1/81 MARS DATA	SUPERVISORY		GS-8 UP	GS-7 BELOW	PROF. & ADMIN.	TECH. & CLERICAL	A	Ax	B	Bx	C	Cx	D	Dx	E	Ex	TOTAL	F	% "x"
					ORG. CHART	% OF TOTAL																	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
KLAMATH NF	16.90	621.9	36.8								14	--	13	--	6	1	61	8	20	8	192	9	8.9
OAK KNOLL	14.3	92.7	6.5	75	25	33.3	26	49	14	61	3	--	3	--	--	--	14	1	9	--	30	--	3.3
*HAPPY CAMP	16.1	91.4	5.7	64	31	48.4	21	33	17	47	3	--	3	--	2	--	5	1	2	1	17	--	5.9
SALMON RIVER	13.6	64.7	4.8	45	12	26.7	16	29	20	25	1	--	3	--	2	1	12	4	4	6	33	--	33.3
*SCOTT RIVER	11.5	80.8	7.0	43	16	37.2	14	29	15	28	3	--	4	--	1	--	1	1	1	--	11	--	9.1
UKONOM	10.0	64.1	6.4	49	22	44.9	16	33	11	38	4	--	--	--	1	--	29	1	4	1	40	9	5.0
MENDOCINO NF	9.70	327.6	33.8								11	--	9	--	2	2	12	--	14	1	51	20	5.7
CORNING	7.6	42.59	5.6	44	15	34.1	13	31	14	30	2	--	3	--	--	--	3	--	4	--	12	--	0.0
STONYFORD	12.2	70.43	5.8	53	17	32.1	16	37	6	47	2	--	2	--	2	1	8	--	--	--	15	17	6.7
UPPER LAKE	12.9	59.62	4.6	34	13	38.2	16	18	10	24	1	--	2	--	--	1	--	--	7	--	11	2	9.1
COVELO	8.1	38.99	4.8	28	12	42.9	12	16	7	21	6	--	2	--	--	--	1	--	3	1	13	1	7.7
SHASTA-TRINITY NF	17.64	832.4	47.2								18	--	15	--	5	--	9	--	22	18	87	11	20.7
YOLLA BOLLA	18.4	79.1	4.3	57	31	54.4	22	35	14	43	3	--	2	--	1	--	2	--	3	8	19	--	42.1
HAYFORK	22.0	102.4	4.7	69	30	43.5	27	42	16	53	6	--	5	--	1	--	1	--	4	9	26	4	34.6
BIG BAR	20.7	72.4	3.5	52	22	42,3	16	36	10	42	2	--	7	--	3	--	3	--	5	--	20	5	0.0
WEAVERVILLE	17.7	94.1	5.3	68	18	26.5	19	49	8	60	7	--	1	--	--	--	3	--	10	1	22	2	4.5
SIX RIVERS NF	10.62	461.1	43.4								19	--	2	2	1	--	21	3	15	1	64	15	9.4
GASQUET	11.4	66.4	5.8	55	35	63.6	19	36	13	42	4	--	1	1	--	--	1	--	3	--	10	--	10.0
ORLEANS	9.4	59.0	6.3	50	43	86.0	14	36	16	34	7	--	--	--	1	--	3	--	4	--	15	3	0.0
LOWER TRINITY	10.1	70.6	7.0	64	24	37.5	21	43	21	43	2	--	1	--	--	--	2	1	4	--	10	4	10.0
MAD RIVER	9.4	58.1	6.2	48	17	35.4	18	40	11	47	6	--	--	1	--	--	15	2	4	1	29	8	10.3

394 11.2

*INCLUDE ZONE ENGR.
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o - EXLCUDE BARRACKS (E AND Ex)

	GOV'T HOUSING OCCUPANCY		PRIVATE HOUSING MARKET							LOCAL COMMUNITY RELATIONS			COMMUTE SITUATION		NUMBER OF EMPLOYEES PER HOUSING UNIT			% HOUSING BY TRAILERS
			AVAILABILITY				COST											
	VACANCIES (25)	TREND (26)	EASY (27)	MOD. (28)	LIMITED (29)	VERY LIMITED (30)	$75M HIGH (31)	$40-70M MED. (32)	$40M LOW (33)	GOOD (34)	FAIR (35)	POOR (36)	AM'T (37)	TIME (38)	BLDG (39)	TRLR (40)	TOTAL (41)	(42)
KLAMATH NF																		42.1
OAK KNOLL	Some	Away From				x		x		x			30	40 Min.	12.5	5	3.6	71.4
*HAPPY CAMP	Some	Away From		x				x		x			12	1/2 Hr.	8.0	10.7	4.6	42.9
SALMON RIVER	None	Into				x		x		x			1/2	1 Hr.+	6.4	2.8	2.0	69.6
*SCOTT RIVER	None	Away From	x					x		x			1/3	30 to 40 Min.	5.4	21.5	4.3	20.0
UKONOM	None	Into				x		x		x			Several	1/2 to 1 Hr.	9.8	1.6	1.4	85.7
MENDOCINO NF																		33.3
CORNING	None	Away From	x				x			x			Few	1/2 Hr.	8.8	14.7	5.5	37.5
STONYFORD	None	Away From				x	x				x		Several	1/2 to 1 Hr.	7.6	6.6	3.5	53.3
UPPER LAKE	Usually	Away From	x				x			x			Majority	1/4 Hr.	8.5	--	8.5	0
COVELO	Usually	Away From		x				x		x			None		3.5	28	3.1	11.1
SHASTA-TRINITY NF																		19.1
YOLLA BOLLA	None	Away From				x	x			x			26	1 to 1/2 Hr.	9.5	28.5	7.1	25.0
HAYFORK	One Usually For Swing	Away From	x					x		x			None		5.8	69.0	5.3	6.7
BIG BAR	Usually	Away From				x	x			x			1/2	1/2 Hr.	4.3	17.3	3.5	20.0
WEAVERVILLE	None	Away From	x				x				x		4	1 1/2 Hr	8.5	22.7	6.2	27.3
SIX RIVERS NF																		50.0
GASQUET	None	Away From			x			x		x			1/2	1/2 Hr.	9.2	55	7.9	14.3
ORLEANS	None	Into			x			x				x	Very Few	Weekly	6.3	16.7	4.5	27.3
LOWER TRINITY	None	Away From		x				x		x			12	1 Hr.	21.3	21.3	10.7	50.0
MAD RIVER	Several	Away From		x				x		x			Very Few	1 Hr to 1 Hr 20m.	6.9	2.8	2.0	70.8
															STUDY AREA AV.			37.2

The percent of permanent employees who supervise other employees (Col. 7) may appear high. The figure does not include the summer seasonal workforce. What may be significant is the variation between units from 26.5% at Weaverville to 86.0% at Orleans.

The management of the "x" category of housing units (Col. 24) is interesting. Most are in barracks facilities and trailers (E and D Classes) and most are on the Shasta-Trinity and the Klamath Forests and concentrated on three districts, Yolla Bolla, Hayfork and Salmon River.

Vacancies (Col. 25) in the Forest Service housing units are not uncommon. Generally these are associated with the easy or moderately easy avail-ability of private sector housing. The two exceptions are associated with a good private sector housing market within a farily easy commute distance. Oak Knoll is closely associated with the Yreka-Montague area and Big Bar with the Weaverville area.

The commute situation (Cols. 37 & 38) varies from no employees commuting to about one half of the unit employees commuting. The need for large numbers of unit employees to commute is directly related to the limited availability of housing in the private sector at the headquarters location. Two notable exceptions are Scott River and Upper Lake districts. Each of these units have several other communities in close proximity to the headquarters location that makes an easy commute.

The number of employees per housing unit (Cols. 39-41) is an expression of the competition employees face in getting into government housing. If trailers are considered adequate housing (See Policy Issues below), the total (Col 41) is most meaningful of the three. If not, then Col 39, Building, is most meaningful.

The pattern expressed by the % of housing provided by trailers, (Col. 42) seems to be reasonable with the high percentages being associated with units that are isolated with limited private sector availability.

POLICY ISSUES
(OBJECTIVE #1)

Quarters Rental. (FSM 6445.03)

There is a whole new survey process underway that may materially alter rents in certain areas. In discussion with District Rangers or district respresentatives, a few indicated that district employees felt the rents were too high but did not play an important part in whether or not employees moved into or out of government houses. There was no indication that current rental rates were in any way a factor in our ability to staff positions.

The use of rental rates as an inducement is currently under consideration in promulgating new legislation.

No recommendations are made relative to rental rates.

Occupancy. (FSM 6445.03)

The current policy of keeping a "swing" house available for short term occupancy by newly assigned employees and in providing long term occupancy for lower graded permanent employees is working quite well in the study area. No policy recommendations are made relative to occupancy. On one district, the rules of conduct in government barracks were cited as a reason seasonal employees chose to live in other then government quarters. This is probably a normal reaction throughout the Region. Whether or not seasonals use government facilities would depend on availability of quarters in the private sector. Managers can certainly expect a greater frustration level of employees who physically don't have other than government facilities choices.

Adequacy of Housing.

There are two aspects of this, the actual standards that facilities are supposed to meet and the decisions that are made about the acceptableness of a facility, related by the "x" subclass rating placed on the facility.

Standards. (FSM 7313.14)

The National Building Codes apply to the structural aspects of government buildings. The meeting of local codes probably varies widely. There was no convenient way to examine how well these codes are met and it was not considered germain to meeting the objectives of this study, so no examination was made.

Another standard related to minimum size of bedroom. A minimum of 80 square feet with no side less than 8 feet. Ceiling height at least 7' 6" that must extend a minimum of 5 feet or at least to one half of the room area. One clothes closet of minimum size (which is not specified) with a hanging rod and at least one shelf. Must have natural light through at least one window.

Data is not available to assess whether or not this standard is being met. Employee renters should provide the data about this in reviewing rental rates that give consideration to the number of bedrooms in the A, B, and C classifications.

The standard (OMB Circular A-18 and FSM 7314) for overall floor space is expressed in ranges as follows:

DWELLING UNIT	NET SQUARE FEET MIN.	NET SQUARE FEET NORM.	NET SQUARE FEET MAX.
Class C & D_1 - One Bedroom (Multi-Family or Apt.) Only	550	730	810
Class B or D_2 - Two Bedroom	750	1000	1250
Class A or D_3 - Three Bedroom	960	1100	1300

A Review of how well these standards are being met is shown in Appendix 6. This review is on a Forest basis excluding S.O.'s and units not in the study area. The number of housing units that are below, meet or exceed the standard with a percent of total are shown for each class, excluding E, F and subclass "x" facilities. Also shown is the average square feet deviation from the normal standard for each class. This gives an indication of how severe the situation may be.

On a Study Area basis 51.8% of the facilities are below the standard size, 40.4% meet the standard and 7.8% exceed the standard. Much of the "Below Standard" units are trailers, which can be more easily replaced than buildings. The Shasta-Trinity has the bulk of buildings that are "below standard" size. The average deviation from the normal size in the study area is -216 square feet.

There is no policy statement in FSM or R-5 Supplements regarding floor space although the OMB Circular A-18 is referred to as a guide. With 59.6% of the facilities in the study area not meeting the "guide" standards, it is apparent that the guide is not being followed.

Recommendation #1: Incorporate an R-5 Supplement in the manual to reflect:

7314 - SPECIFIC DESIGN STANDARDS.

1. Reasons for purchase, lease or construction of facilities that are below the minimum or above the maximum size as that stated in OMB[*] Circular A-18, will be documented as part of the decision record, e.g., purchase order, contract, building plan approvals, etc.

2. Mobile homes meeting designs standards are considered adequate and acceptable housing in R-5.

[*] Note: Similar language is found in FSM 7314.16, Standards for Purchased Residences. By making this applicable to the entire 7314 section of the manual, all bases would be covered.

Acceptance. (FSM 6445)

This relates to subclass "x", which is defined as: Poor condition and generally unsuitable for the intended use. Resolution for x-ratings is stated as: Should be 1) abandoned, 2) reconstructed, 3) modernized or 4) replaced. The Forest Service stated policy is to eliminate all x-class facilities. It is implied that one of the four methods would be used.

What constitutes "Poor condition and generally unsuitable for the intended use" is not clearly stated in the manual. Consequently, a wide variation in application can and most probably does exist in the study area. Since the "x"-rating does have an influence on rental rates, there is a temptation to be extra liberal with interpretation to give an employee a "break."[1/]

The continued use of "x"-rated facilities clearly subverts the intended purposed of the rating, which is to alert the organization that definitive action is required to meet the regional policy.

> Recommendation #2: R.O. Engineering establish guidelines for determining the "x"-rating for R-5. An R-5 Policy be established in FSM 6445.03 that requires all "x"-ratings be accompanied by a specific action plan to meet regional policy of not using "x"-rated facilities for more than two years from the date of first "x"-rating.

Transfer of Station. (FSM 6500)

This aspect of employees going to new jobs was not given indepth consideration for two reasons. First, there are a myriad of other actions being taken or considered for promulgating new regulations that would make an effort here totally redundant. Second, transfer of station problems would only affect staffing in the extreme case where an employee became disillusioned and quit the service. The recent regional policy of giving employees the opportunity to accept positions contigent upon selling their former residence is related more to the housing market they are leaving rather than the one they are entering.

Other policy items are discussed as part of specific items in the remainder of the report.

[1/] - W.O. currently working on a revision of FSM 6445 (Rental Rates) that will change this.

MAJOR INFLUENCING FACTORS
(OBJECTIVE #2)

The discussion in this section will necessarily be fairly subjective. It is based on discussions with District Rangers both in and out of the study area, other employees, personal experience, GMR's, PME's and other special reports. Influencing factors will be discussed in three categories, human, physical and organizational.

Human

Since influencing factors here are closely related to personal value systems that can be as numerous as the individuals involved, only fairly common or general factors will be discussed.

Equity. Building equity appears to be a prime motivator and is almost universally desired by employees. There are obviously many barriers to getting started on this "Road to Equity," especially for employees in the lower grades. There are things such as high interest rates, inflation, limited private sector housing market, other drains on income, to name a few.

One of Webster's Dictionary definitions of equity is "the value of property beyond the total amount owed on it." A definition of property is "a thing or things owned, holdings or possessions collectively; the right to possess, use and dispose of something; ownership." We commonly associate equity with owning real estate, for most of us, our home. Because of the high rate of inflation in recent years, real estate equity building has been very lucrative. Real estate is not the only way to build equity.

When employees are asked to accept assignments, quite often with a promotion, in areas where equity building opportunities appear to be absent or very limited they often do not accept because the reward of the promotion does not offset their desire to build equity. Sometimes when they do accept, it is with intent to get in, get the promotion and get out as quickly as possible. Our current tenure policy has reduced the potential for quick in and out. This forces employees to take an even more critical look at remote location assignments from an equity viewpoint.

> Recommendation #3: The Forest Service (R-5) develop ways to assist employees to get into the equity building business.

Some possibilities are:

a. Provide housing information referral activities as a part of official requirements and duties.

b. Providing and/or guarantee of, low interest rate loans to employees or Government construction/purchase with lease/purchase option for employee.

c. Provide financial allowances, similar to uniform allowance, for meeting higher specifications requirements that would make mobile or modular homes suitable for placement in a variety of "Forest Service" situations, e.g., increased snowload and insulation requirements in mountainous areas, counties, etc. (Note: This is closely associated with recommendations #12 and 13).

d. Provide financial counseling on a periodic basis as an official requirement and duty of management that would emphasize "alternative" equity building when real estate is limited or not available.

Family. Considerations for family revolve around schooling, shopping and medical care. In remote locations, schooling is usually limited to the elementary grades 1 to 8 at the local community with busing or boarding out, to high school a common occurrence.

In many communities the general country store type operation is often the rule. Usually a couple of food markets, hardware and dry goods stores, sometimes in small shopping centers, represent the "best" of shopping opportunities available.

Medical care services are more often than not only a limited number of general practitioners, often only one choice without a long trip. Sometimes it is only the traveling "clinic" operation with a visiting doctor and/or public health nurse. Emergency care most often means only first aid and evacuating the patient to a major medical facility. In the winter time, evacuation becomes much more difficult. Often, even non-emergency things like childbirth, require "living out" to be close to an adequate facility and/or a doctor.

Recommendation #4: The Region institute and honor "assignment" agreements for selected locations that would guarantee reassignment at the end of the required tenure period (Note: Some Forests are now doing this on a Forest basis. This would widen reassignment opportunity to a Region basis.)

Recommendation #5: The Forest Service (R-5) maintain a core of Emergency Medical Technicians at selected stations in remote areas. (Maintenance includes the training, special equipment and facilities needed for emergency medical treatment, e.g., Helicopter/V.T.O.L. pads, etc.).

Recommendation #6: Forest Service (R-5) develop ways to mitigate the adverse effects of remote living on employees. Some possibilities are:

a. Commissary.

b. Paying mileage or use of Government vehicle for periodic shopping trips of employee and family.

c. A remote location differential (The military has at least 10 different "pay" items other than basic pay. See Appendix 14. Also our own differential system is not simple. This should be considered in addition to any Cost of Living Adjustments. It might even be hooked directly to our ammenities rating for our locations. There may also be a logical tie to "top of grade" pay for shortage category "people.")

Recommendation #7: Require vacancy announcements to list the family living items, e.g., school, shopping, entertainment, medical situation, etc. (This would force disclosure of the actual situation prior to transfer. Some Forests are supplying some of this type information now.)

Social: The type of social setting is becoming a more important aspect for employees and their families as the years progress. The kinds of activities that were acceptable to employees at remote locations just a few years ago are not considered acceptable to newer employees. Lack of radio and television reception, higher educational opportunities, and cultural events are no longer being offset by great "hunting and fishing" opportunities.

Recommendation #8: The Forest Service (R-5) obtain unconstrained authority and provide communal type ammenity facilities and equipment for groups of employees in selected remote locations. (The intent is to supplement the "hunting and fishing" opportunities. Some possibilities are:

a. Community radio/T.V. (satellite) reception facilities.

b. Communal recreation facilities, tennis, swimming, basketball, baseball, horseshoe, aerobic dancing, meeting space, equipment, etc.

c. Sponsoring and providing cultural activities for the local Forest Service employees, including the remote learning aspects of higher education (T.V. courses, video lectures, films, etc.).

(Note: Local, non-employee residents should be allowed to use facilities up to reasonable capacities with Forest Service management. Reasonable user fees are possible. In general the capital investment is to provide staffing to accomplish the organizational mission at remote locations.

Working Spouse. The opportunity for a spouse to find work is often critical to couples, especially those trying to raise families and build equity in a highly inflationary economy. In many remote locations, these opportunities are very limited.

Recommendation #9: The Forest Service (R-5) make job information referral a regular responsibility and duty of management at remote locations.

Recommendation #10: The Forest Service (R-5) hire spouses full time at selected remote locations. (This authority might be limited to the required tenure period with extentions tied to additional tenure agreements.)

Physical

The concern here is not only related to how far it is or how long it takes to reach ammenities but also the location and condition of the facility(ies). Travel time and difficulty, especially during winter, play an important part in employee decisions. When it takes 1 1/2 hours just to reach mediocre shopping facilities for example, employees are reluctant to accept positions. When this is coupled with crowded, run-down (old) facilities without "normal" power, trying to exist with overloaded sewerage systems and minimal water systems, employee frustration levels tend to increase. Incumbent employees tend to trasmit these frustration messages to prospective employees, many times without intending to do so. (See recommendations #'s 3, 9, and 11).

Organizational

This relates to those organizational activities that can have an effect on employees from the social and psychological viewpoint. The "Forest Service Family" concept is becoming increasingly difficult to foster, even in remote locations. When employees are separated by 1/2 to 1 1/2 hour commutes, often in opposite directions, off-hours associations are not too likely. The opportunities to participate in social functions with organizational identity is practically nil, e.g., Forest Service Bowling, Softball, etc., "teams" which would involve families of employees.

Another area of consideration is the working environment, including the managerial climate and the effect on incumbent and prospective employees. Taking care of the physical adequacy of the workplace is just one of the "hygiene" aspects of worker motivation according to Herzberg. Probably of as much importance, is the "managerial" climate in which employees must work. If a poor managerial climate exists, along with all the other factors related to remote locations, the "rub-off" effect from incumbent to prospective employees is amplified. From this standpoint, developing a good managerial climate is critical in remote station situations.

It takes very special talent to combine the objectives of the organization, which are the basis for organizational existence, with the needs of the people, who must operate the organizational structure to meet those objectives. It is especially difficult when, in fact or by interpretation, the laws, regulations or policies governing the organization indicate an impropriety when trying to meet the needs of employees. The tie between meeting employee needs and meeting organizational needs is not always clear and is sometimes overlooked in our preoccupation with day to day productivity and dealing with crises.

The underlying reasons for employee discontent is sometimes masked. For example, an employee may be unhappy with the managerial climate on a unit. Dealing with this situation is not done easily. Fear of reprisal, whether or not we want to admit it, is a prime motivator in the Forest Service. It may be much easier for an employee to deal with the situation in a "safe" (non-personal) area, by complaining about the commute, lack of ammenities, general housing situation, etc. We can only speculate about how much of this kind of behavior actually occurs within our organization.

The consequences of failing to deal appropriately with these types of situations by unit managers can be greatly amplified at remote locations. It therefore becomes critical to meeting organizational mission and goals at these locations. (See the preceding recomendations for part of the solution).

> Recommendation #11: The Forest Service (R-5) make "demonstrated" ability to build and maintain an appropriate management climate a selection factor for unit managers at certain remote locations or hire on a consultive basis, those special skills needed to train unit managers on site until appropriate climate is achieved. (Demonstration to come from last previous assignment, which in many cases would mean isolated stations would not be a first managerial assignment. This also places a responsibility on the organization to institute a fair and effective assessment process to determine if the ability has been, in fact, "demonstrated."

PROJECTED WORKLOADS
(OBJECTIVE #3)

Assumptions

The general assumptions made in the introduction are repeated here. Ongoing changes on certain units may change the relevance of this report, e.g., Klamath reorganization proposals. The projected information displayed may be different if we make significant changes in the current situation, e.g., if we change the distribution of F.T.E.'s in the various ADVENT elements from the 1982 proposals, the projected needs would be different for the "out" years.

The national workload for the Forest Service in future years will increase in most categories of work (See Appendix 7) according to information supplied for the Resources Planning Act (RPA) of 1974, as amended by the National Forest Management Act (NFMA) of 1976. This is the best information currently available. Some differences can be expected as more accurate "field" data becomes available for inclusion into RPA Target setting processes.

The Process

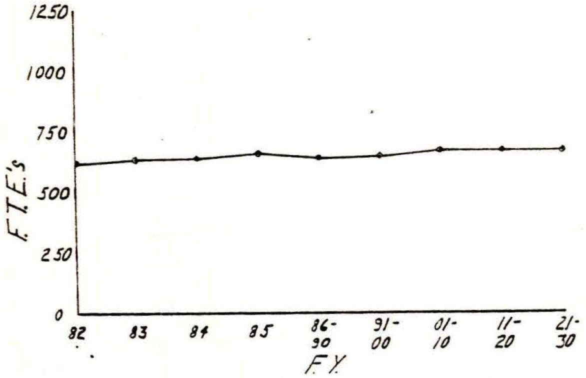
The intent here was to get an idea, based on the best available data that was easily obtainable of what effect projected workloads would have on staffing needs in the future on each Ranger District. Staffing requirements have a direct relationship to facility needs. Two categories of information were selected for review. Workload as expressed by Resources Planning Act (RPA) outputs in the proposed Regional Land Management Plan and Full Time Equivalents (FTE's).

Outputs. The disaggregation of RPA outputs to the forests was done by the Regional Plan (See Appendix 8). Converting forest targets into district targets was done by developing a percentage relationship between the district and forest, using the LMP elements (See Appendix 9). Where directly convertible information from ADVENT was available, it was used. In some cases information relative to potential for producing outputs was used to develop the percentage relationship, e.g., estimated number of miles of unblocked major streams as a measure for thousands of pounds of anadromous fish outputs.

Each districts' share of RPA targets was developed and recorded (See Appendix 10) for the period of 1982 to 2030.

FTE's. The disaggregation of F.Y. 1981 FTE allocations to districts was supplied by each Forest Supervisor's Office. The F.Y. 1981 allocation formed the basis for all FTE projections.

Combining FTE's and Outputs. For FY 1982, each forest distributed its FTE allocation by ADVENT element. At this time there is not a total, direct convertability from ADVENT elements to L.M.P. elements with associated RPA targets. With only minimum disaggregation and aggregation of ADVENT elements, a fairly reasonable tie was made between the two systems.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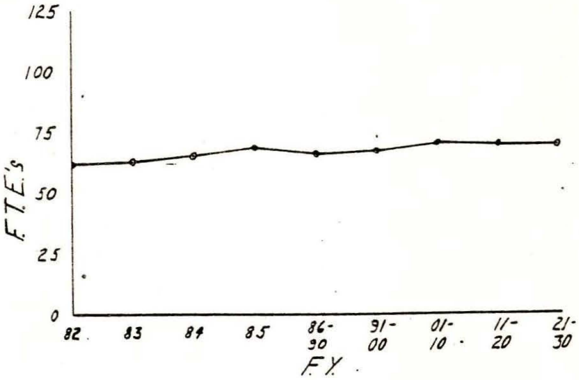
Forest Klamath District All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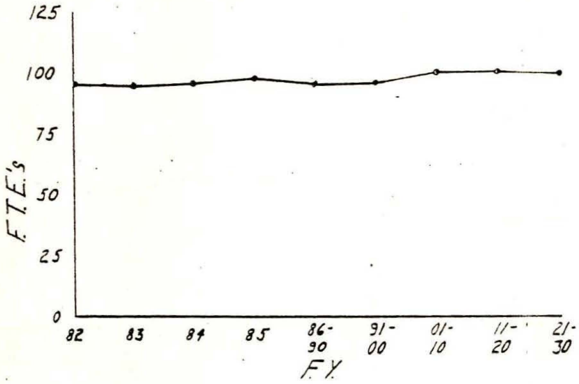
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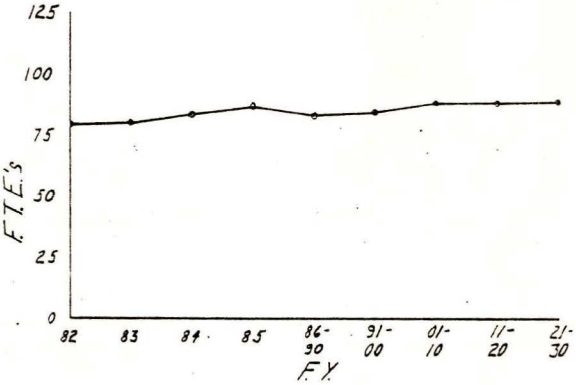
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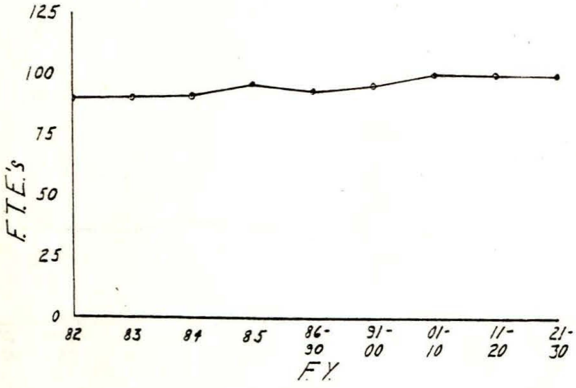
Forest Klamath District Scott River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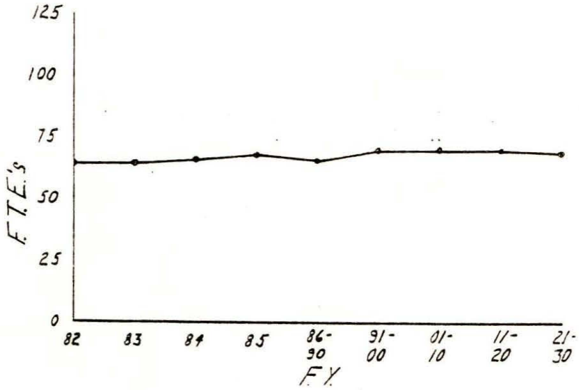
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PROJECTED F.T.E.'s
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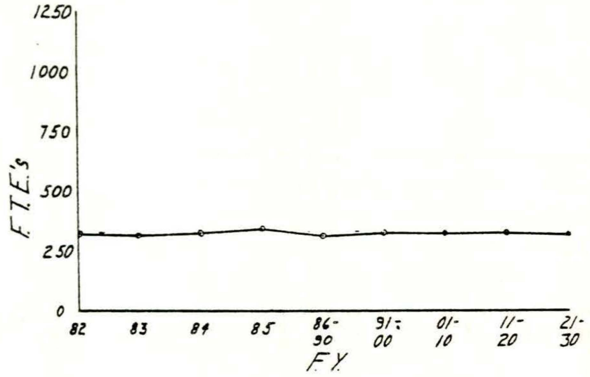

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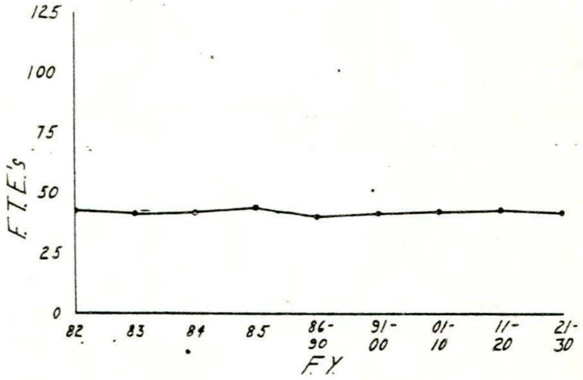
FOREST MENDOCINO DISTRICT CORNING



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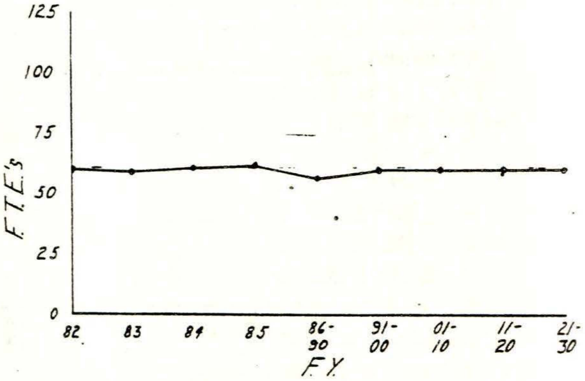

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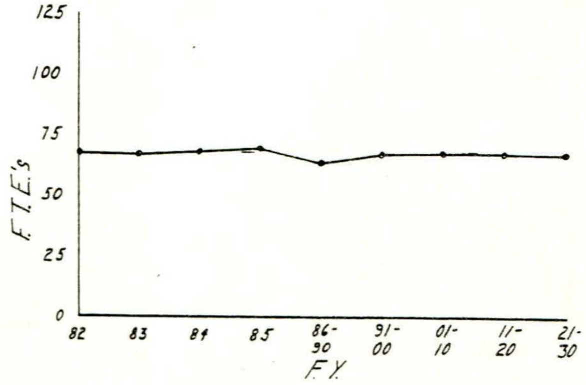

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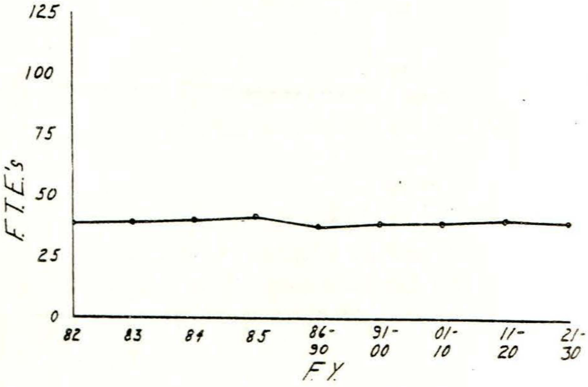

PROJECTED F.T.E.'s
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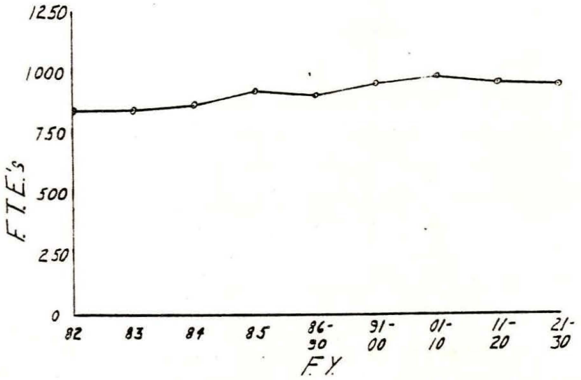
FOREST SHASTA TRINITY DISTRICT ALL



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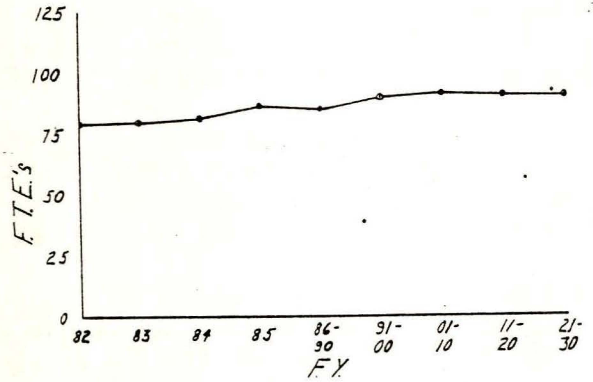

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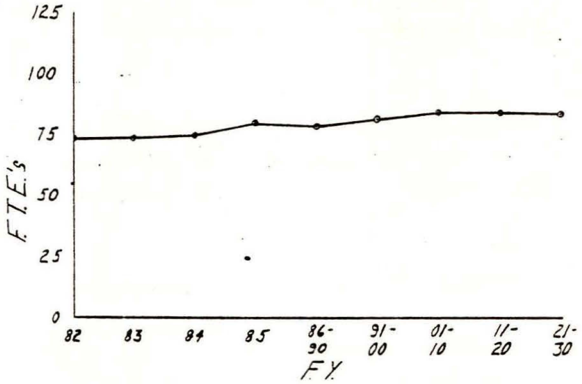

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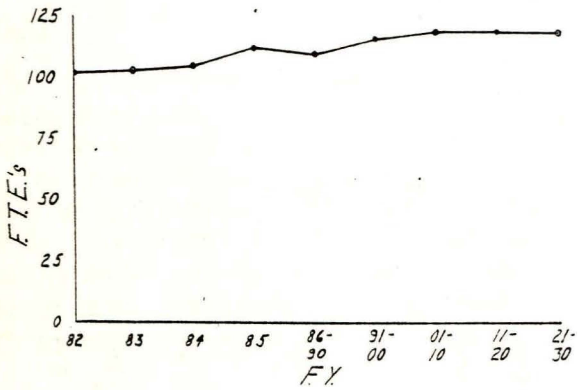

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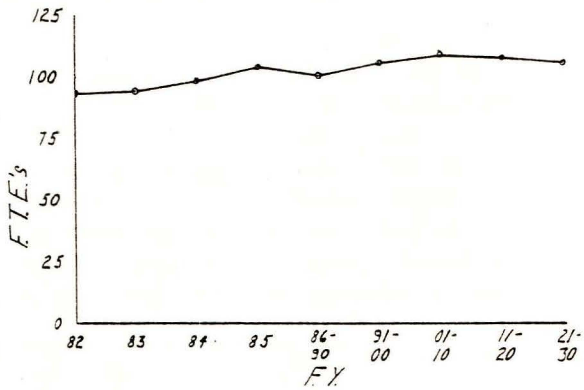

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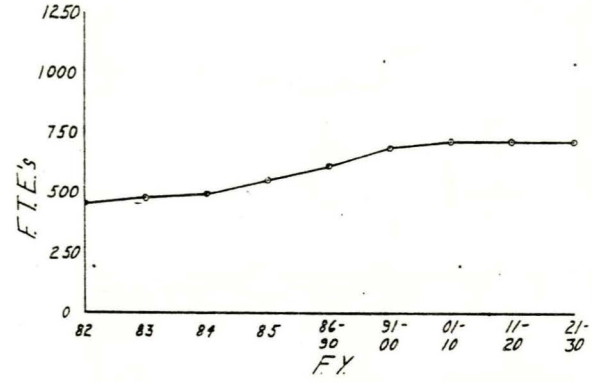
FOREST SIX RIVERS DISTRICT ALL



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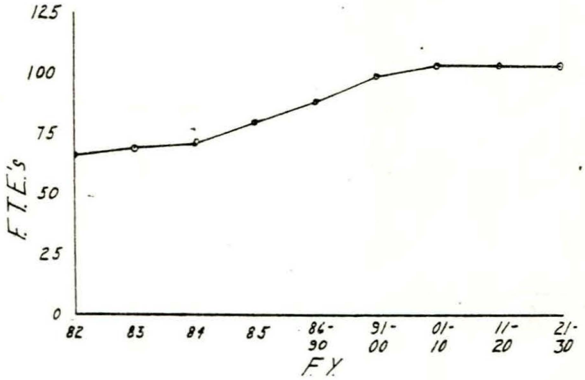

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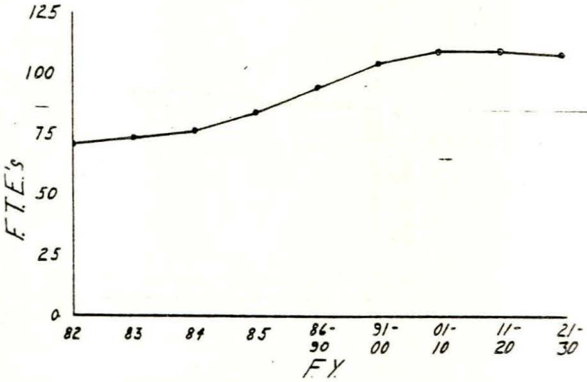

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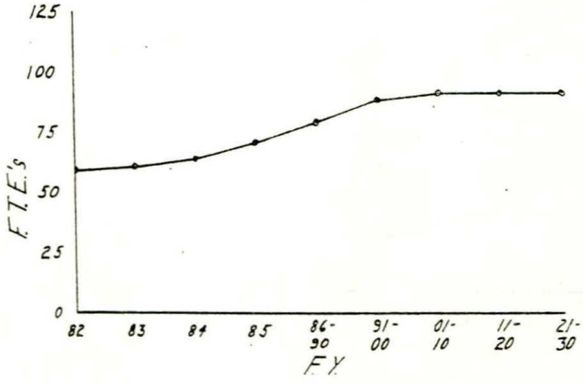

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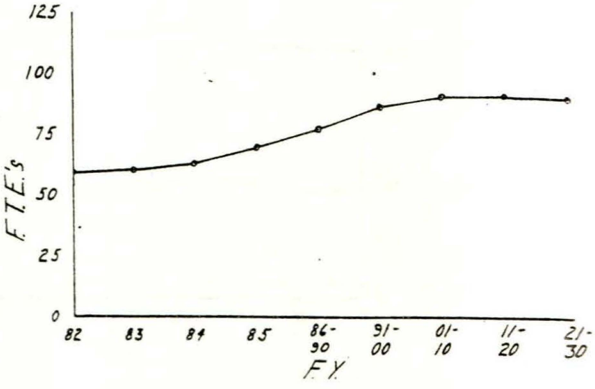


For each unit F.Y. 1981 FTE Allocations were distributed to the L.M.P. elements using the Forest's distribution percentage (See Appendix #8). For each element and year/period, the projected targets were converted to projected FTE's which resulted in projected total FTE's weighted by the type of work represented in each element, e.g., acres of reforestation. Those kinds of work that currently require large amounts of FTE allocation would require a similar ratio in future years (See Appendix 11).

The Data

The projected total FTE's for each unit are shown in the graphs below. Since the district FTE's were derived from the Forest percentage relationship and the district targets (representing workload) were also derived from the percentage relationship with the forest, the resultant graphical "curve" is pretty much the same for all units on a forest.

Klamath. This forest and its districts will experience a slight increase in FTE's needed up to about 1985 with a slight drop-off through the year 2000 and then another increase in 2010 on through 2030. Two elements, Timber and Protection account for 85.74% of the Forests F.Y. 1982 FTE allocation. A similar pattern occurs for all Forests.

Mendocino. This forest and its districts will experience a very slight increase in FTE's in only one year, 1985, in the projected period. In general, there will only be a very slight decrease. The Timber and Protection elements account for 86.30% of the Forests' 1982 FTE Allocation.

Shasta-Trinity. This forests and its districts will experience a fairly stable rise in total FTE's needed up to about 2010 with one slight downward period of 1986-1990. After 2010 there will be a slight down trend up to 2030. Timber and Protection account for 78.46% of the total FTE's.

Six Rivers. This forest and its districts will experience a steady and dramatic rise in FTE's needed, leveling out only from 2010 on. This is directly traceable to a large increase in the Timber element. Programmed Sales offered are projected to rise from 160.0 MMBF in 1982 to 273.1 MMBF by 2001. This is a 171% increase in an element that utilizes 78.65% of the forest's workforce. Timber and Protection elements account for 88.92% of the total FTE's.

Conclusion

The Mendocino, which will have a very slightly declining workload coupled with fairly easy commutes and/or an available private housing sector, will not have an increasing housing problem in the future. On the other extreme, with slightly to dramatic increases in workload, the Salmon River-Ukonom area on the Klamath, the Orleans-Mad River area on the Six Rivers, and the Yolla Bolla District of the Shasta-Trinity already the tough housing situations of today, will become even more critical in the years ahead. Because of fairly reasonable commutes or some availability of private sector housing, the in-between units will experience some housing problems.

Even though RPA targets for the study area are generally increasing, except for the Mendocino, the political situation can be expected to provide resources that are inconsistent with these targets in an erratic manner. This could result in many "ups" and "downs" in budgets over the year ahead. There will be an ever increasing emphasis on efficiency of operations to increase our productivity.

To meet the everchanging political/socio-economical/industrial situation, the Forest Service must maintain flexibility of operations to a very high degree and at the same time provide quality service to the public and to its employees.

> Recommendation #12: The Forest Service (R-5) build adequate, attractive mobile home parks for all new residential facilities. (No other type development to be approved. The decision to build is based on lack of adequate housing in the private sector. This will provide the agency the greatest flexibility in providing for employee housing.)
>
> Recommendation #13: The Forest Service (R-5) eliminate all existing permanent family residential facilities at the earliest practical time in favor of mobile home facilities. (In no case is other than minor maintenance to be done, without regard to source, to a permanent residential facility. Permanent barracks facilities to be eliminated in favor of mobile facilities when use drops below a reasonable amount or the facility needs heavy maintenance and mobile facilities are available. Also see recommendation #2).

ORGANIZATIONAL SYSTEMS AND PROCESSES
(OBJECTIVE #4)

The organizational processes determined to be appropriate for review were the planning and programming of facilities construction and facilities maintenance. Information about the current processes being used was developed by review of current data and discussion with R.O. Engineering, and W.O. Facilities programming personnel. Also considered were some selected aspects of staffing and pay as they relate to selection and retention of employees at remote locations. Manual and regulatory review, some discussion with people in Personnel and a lot of personal experience were used to evaluate these issues.

Staffing and Pay

The review here centered around attracting employees to serve in remote locations rather than resorting to "directed assignments" as a means of meeting organizational needs. Some references to possible actions were in recommendations #4, assignment agreements, #6, a remote location differential, and #7, making family living situation requirement in vacancy announcements.

Facilities Construction

The regional objectives for F.Y. 1982-86 include specific ones for the Fire, Administrative and Other (FA&O) facilities program. The current decision process for construction is as follows:

1. Forests, guided by the regional objectives, their own inventory, their own condition surveys, and their own workforce management plan with its tie to projected workloads, develops and submits their proposed construction program to the Regional Forester annually about March 1. All required justifications, and analyses are included. This proposal is for the second fiscal year in the future, e.g., March 1, 1981 proposal was for F.Y. 1983 budget.

2. R.O. Engineering checks submittal for meeting requirements and cost accuracy and displays proposals on an evaluation chart.

3. The regional multi-functional group develops the priorities, including review by the regional engineer.

4. The FA&O Program Manager conducts a review by Timber, Fire and Recreation staff directors.

5. Program Manager presents proposed program to Regional Forester and total Staff Directors for final approval.

6. Program Manager prepares final Regional package for submission to Chief's Office.

Region 5, in the early seventies, embarked on a project to bring facilities up to standards with a high priority for correcting health and safety items. A very large part of the annual FA&O budgets since that time has been and is being applied to these H&S activities. For example, six of the first seven priority FA&O proposed projects for F.Y. 1983 are directly linked to H&S needs.

This process has necessarily resulted in an FA&O program of many, rather small, projects scattered throughout the region. When a fairly large project is started, it is usually a multi-year situation and should rightly stay in the funded projects until completed.

There are some weak links in the present process. 1) The inconsistency between subordinate units in the region, 2) The loose, almost "top of the head" linkage between Workload, Workforce Planning and development of FA&O proposals and 3) The Management consideration given to the effect of quality requirements on workforce needs.

Inconsistency. This is related to the reporting of current value of facilities (See Appendix 13) and the wide variance between units in determining the need for facilities action (maintenance, reconstruction, etc.). A considerable training effort is and has been ongoing in the Region to help reduce the inconsistencies between units. Although somewhat improved over past years, there is still a long way to go. (See recommendations #'s 2 and 18 for partial solution alternative).

Linkage. In the past it has been almost impossible to make a visible tie between RPA targets, actual on-the-ground workload, workforce plans and FA&O program proposals. The tie between workforce plans and FA&O program propsoals is in the form of space requirement studies and seems to be working all right. The big problem is the basis used to develop the workforce plan. We have a lot of information about what it takes to do project and recurrent work in the ADVENT System. When looked at on a multi-year basis, this information easily relates to the amount and kinds of skills needed for use in workforce planning. There is also the aspect of "efficient" use of an existing workforce that must be considered. There must be a continual search for more efficiency in our operations.

We do not currently record the amount and kinds of skills actually used to accomplish work. We do record the amount of time and money spent by Management Information Handbook (MIH) codes. This falls short of providing a solid tie between skills needed (ADVENT), skills planned (Workforce Plan) and skills used (validation needed in order to make adjustments in future years - PAMARS System).

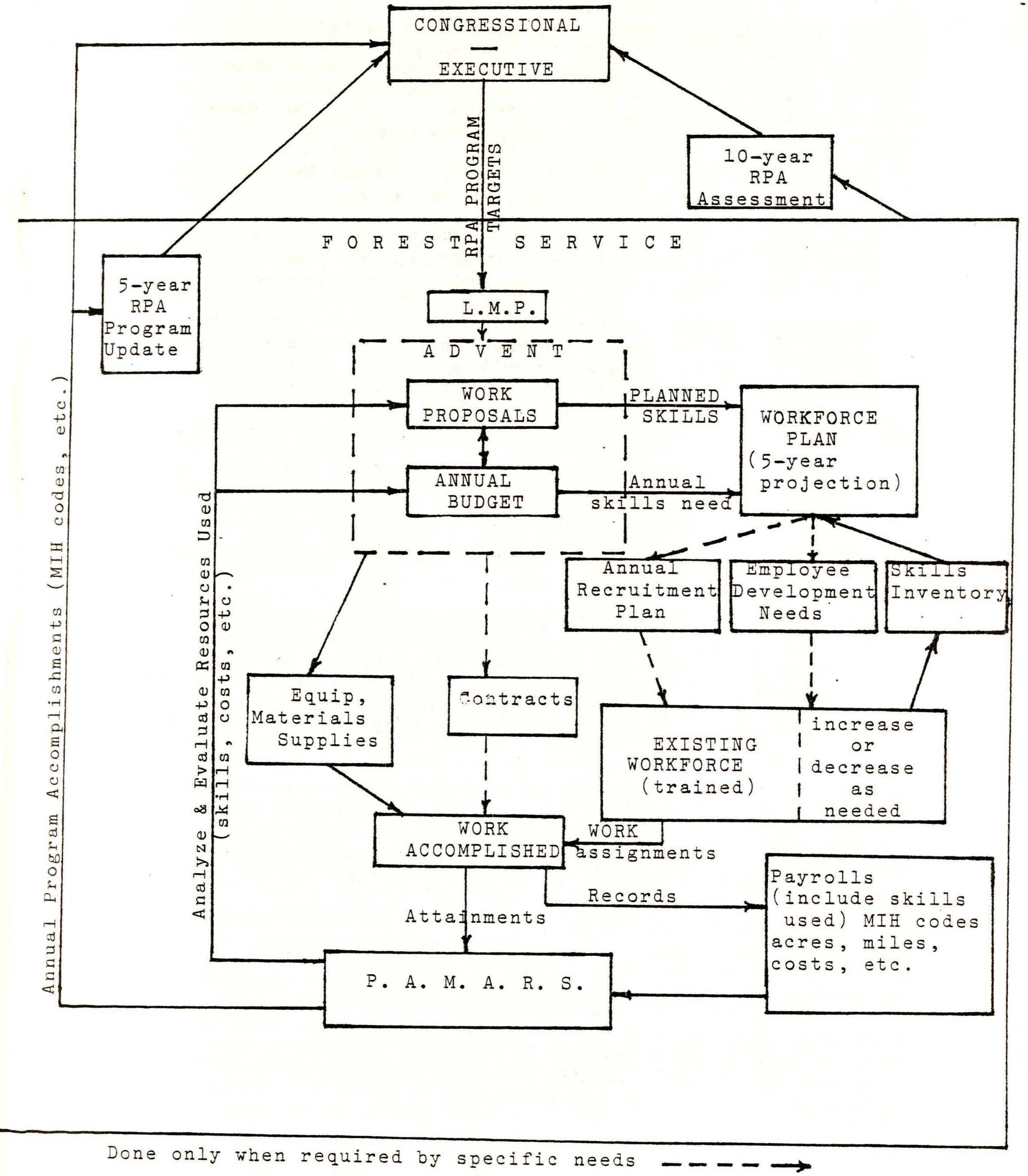
There are two essential ingredients to Workforce Planning.

1. How much of what kinds of skills do we need to accomplish our planned work.

2. How much of what kinds of skills do we have available in our existing workforce.

The deviation, plus or minus, between these two should be the basis of our workforce plan, which should be on a 5-year projection. There are three obvious ways to obtain skills 1) train or retrain existing employees, 2) Recruit and hire and 3) contract on a project (one-shot) basis. See the FLOW DIAGRAM below.

FLOW DIAGRAM


CONGRESSIONAL
—
EXECUTIVE
RPA PROGRAM TARGETS
10-year RPA Assessment
FOREST SERVICE
5-year RPA Program Update
L.M.P.
ADVENT
WORK PROPOSALS
ANNUAL BUDGET
PLANNED SKILLS
Annual skills need
WORKFORCE PLAN (5-year projection)
Annual Recruitment Plan
Employee Development Needs
Skills Inventory
Annual Program Accomplishments (MIH codes, etc.)
Analyze & Evaluate Resources Used (skills, costs, etc.)
Equip, Materials Supplies
Contracts
EXISTING WORKFORCE (trained)
increase or decrease as needed
WORK ACCOMPLISHED
WORK assignments
Records
Payrolls (include skills used) MIH codes acres, miles, costs, etc.
Attainments
P. A. M. A. R. S.

Done only when required by specific needs - - - →

The tie between Land Management Planning with its RPA targets (which represents work to do) and ADVENT (the proposal to do work) is almost synchronized (See Projected Workload section in this report). By making a few adjustments, the elements of both LMP and ADVENT could be transferable, one to the other. Information credibility will become better and better as the relationship of our various systems becomes clearer to all our employees and the public.

> Recommendation #14: The Forest Service (R-5) adjust LMP and ADVENT elements to make them directly transferable, one to the other.
>
> Recommedation #15: The Forest Service (R-5) require that Workforce Plans be based on a 5-year summarization of ADVENT data that displays skill needs and an accurate inventory of skills available in the current workforce.
>
> Recommendation #16: The Forest Service (R-5) report, accumulate and display skills used for unit managers to use in making adjustments to proposals to do work in ADVENT. (This will provide a completed feedback loop that is essential to increased efficiency and improved management.)

Some possibilities are:

1. Assign a distribution percentage to each of the skill codes related to a specific M.I.H. code with time charged to the M.I.H. code automatically distributed to specific skill codes.
2. Record payroll charges by both MGT. CODES and skills codes for accumulation by either or both.
3. Convert to skill codes by LMP/ADVENT elements (dropping MGT CODES and using element codes). Elements codes could include various accounts to serve like the current management code, e.g., 1st two digits are the element, last 3 or 4 the account. Each account could either have pre-determined skill codes & MIH's associated with it for automatic distribution or include skill codes and MIH Codes as part of the payroll listed number.

Quality. In order to obtain quality it is necessary to expend resources. Once we have squeezed the efficiency "lemon" dry (and we should continually search for ways to keep it dry), we can increase quality by adding more "efficient" resources, e.g., people, money, etc. The question then becomes, "How much quality do we want and how much are we willing to "pay" for it?"

Any time we judge quality, we do it by comparing the actual product, performance, etc., against a desired set of quality standards. Often they are only in the head of the judger and not at all clear to others. If we want employees to produce quality products, performance, etc., then as managers, we must clearly communicate those quality standards to our employees before they start work. Since there is a point of diminishing returns relative to the resources spent to obtain quality, it is equally important to define the acceptable quality level. This is especially true in relation to tangible products resulting from our work efforts.

A few years ago, Region 5 embarked on a process to define the quality required in functional products on a region-wide basis. This process was interrupted by the passage of the Civil Service Reform Act of 1978. We went into a process of developing quality standards for performance. These performance standards relate more to how we perform our work than the quality of the products. In many cases they refer to producing work that meets or exceeds quality standards. Quite often these product quality standards are not clear, difficult to find or are non-existent.

Recommendation #17: R-5 complete the development of "Quality Work Guides*" for functional activities.

* Replaces the old Job Performance Requirements (JPR) terminology.

Facilities Maintenance

The process of maintenance starts with a set of facility standards, written or otherwise. A condition survey is made comparing the facility to these standards. The negative deviations from the standard represents the work needed to bring the facility "up-to-standard." (See Appendix 13).

In R-5, these needs are categorized into Health and Safety and other items. There is also an indication if the need was determined by a conditon survey (inventoried) or not (uninventoried). Heavy maintenance, reconstruction or replacement construction is usually indicated as separate project items over and above regular maintenance.

In this region, building facilities are kept in surprisingly good shape, even though the actual dollar allocations appear to fall quite short of the projected needs. Our allocation process is closely tied to the "current value" determination with all its problems. Because of short funding over the years, it became common practice to do maintenance with contributed labor, which kept (and perhaps is still keeping) our facilities from falling "around our ears." The fact remains though, that resources were expended to accomplish the work. Our recording systems do not reflect much of these "contributed" types of resource expenditures. Because of these activities our cost effectiveness evaluations will be something less than accurate for maintenance of facilities, although in recent years managers have been instructed to pay for all maintenance from maintenance funds and not use contributed labor. There is also a point of diminishing returns for maintenance activities where we do not wish to expend any more resources on a facility. Determining this point will be part of accomplishing recommendation #2. Also see recommendation #18.

Special Issue. A special concern was expressed by engineering personnel that at least has an indirect bearing on the area of consideration of this study. This has to do with our processes used in the total management of facilities.

Currently, the FA&O part of the total program is the only part that has R.O. Facilities Specialists involved in the program decision process. Facilities Specialist involvement in leased or project funded facilities is usually after the decision is made and is related mostly to meeting construction or building standards.

Cost information for construction, operation and maintenance is accumulated in the R.O. only for the FA&O facilities and for leased-facilities fees. These leasing fees are rising dramatically.[1] This does not permit the Region to look at our total cost of construction, operation and maintenance relative to the "point of diminishing returns." Whether on a District, Forest, Region or Service-wide basis, it is important for the agency to have some way to evaluate the cost effectiveness of our facilities program.

The current administration is very concerned about short-run expenditures of government funds. At the same time Congressional committees are discussing the need for long-term capital investments relative to the management of the nation's forest lands. These two are at somewhat different ends of the spectrum although both are highly desireable. The rationale for making long-term capital investments in the next few years will meet with extremely close scrutiny and must be well founded.

With our current system, it would be very difficult for the Forest Service to present a valid portrayal of our facilities management program to use in the decision to make long-term capital investments in facilities. Intuitively we think lease costs are too high to be a reasonable investment. On the other hand, we cannot make a good case for long-term investment either. Thus we are caught on the horns of dilemma.

> Recommendation #18: The Forest Service (R-5) develop ways to ensure that we do not exceed the point of diminishing returns in our total expenditure of resources in the construction, operation and maintenance of all our facilities, without regard for funding sources or ownership. (This may require an indepth analysis to identify specific actions needed to accomplish this recommendation. It will be important for the agency to accurately summarize data from one level to another for decision making purposes.)

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[1] - From one lease period to the next, the Cannell Meadows Ranger District facilities will go from about $8.27/sq. ft. per year to about $14.10/sq. ft. per year, a 170% increase.

ANALYSIS of RECOMMENDATIONS

The following charts display information about each recommendation. Although separate recommendations are presented, it is also important to be aware of the cummulative effects and inter-relationships between them relative to the stated purposes of this study, i.e., improve our ability to recruit and retain staff. Management decisions will be needed for acceptance, modification or rejection of specific recommendations.

No.	DESCRIPTION	CONSEQUENCES		IMPLEMENTATION LEVEL	COST ITEMS	STAFF INVOLVEMENT *-LEAD	OTHER CONSIDERATIONS
		POSITIVE	NEGATIVE				
1.	Document reasons for lease, purchase or construct facilities that are not within standards. Mobile Facilities are considered adequate and acceptable housing. (FSM 7314)	Would require approving officers to give consideration to Standards. It would be clear to employees that Mobile facilities are considered adequate. Would leave a permanent record of the decision rationale for future reviewers.	Would be an added requirement (already required for purchase of residence. FSM 7314.16)	Regional, at least for immediate future. (Service wide policy could be easily changed to incorporate.)	Preparation of Policy Direction. Each proposal would require a written statement to be filed with decision document.	*ENGINEERING-Policy Development FSM 7300.	Look at National Rewrite to see if this could be included. Circular A-18 should be reviewed for coordination needs.
2.	Guidelines for "X-Rating" of facilities and an action plan to eliminate each such rating.	Would provide more consistency within the region. Assure positive management action to deal with unacceptable situations. Remove temptation to use "X-Rating" for quarters rental enhancement. Provides an on-going process for future MGT. Decisions.	MGRS, May not rate facilities "X" when they need it.	Regional (Is also applicable to service wide.)	Preparation of Guide-one person 2 wks., plus typing & printing. Prepare Policy Direction. Each "X-Rated"Facility would require an Action Plan.	*Engineering-Guidelines & Policy. A.M.-Qtrs. Rental Aspects.	We do have a regional objective to eliminate "X-Rated" FA & O Facilities by 1985. (L.1.2-R-5's Multi-year Direction Package)
3.	Help Employees Build Equity.						
3a.	Housing information referral activities to be official duty requirements.	MGRS. would clearly know they are expected to provide housing information to prospective employees. Would improve organizational image about official caring about employee needs, not just leaving them on "Their Own".	Could become confused with realty activities. Would require local units to work at keeping information up dated.	Regional Policy (Applicable to service wide).	Preparation of Policy Direction. Effort at each local unit to assemble and disseminate information.	*A.M. for Policy. P.M.-Tie to Staffing vacancies.	
3b.	Low interest loans or Gov't Construction Purchase and a Lease/Purchase option to employees.	Encourages employees to build Equity. Investing in mobile facilities would make it easier for employees to move to other Forest Service Locations.	Would be in competition with Private Sector Loan Market. Not easy to obtain authority or to administer.	Congressional Act.	Pre-Act. Cost of making legislative proposal, including economic and political research needed. Post-Act. Administration cost (could be Farmers Home Admin.)	*F.& A.M. for Proposal- Consultive A.M. P.M. A.S. other Agencies, Employee Credit Unions.	

No.	DESCRIPTION	CONSEQUENCES		IMPLEMENTATION LEVEL	COST ITEMS	STAFF INVOLVEMENT *-LEAD	OTHER CONSIDERATIONS
		POSITIVE	NEGATIVE				
3c.	Financial Allowances to offset higher Mobile/Modular home standards for use at Forest Service sites.	Incentive to invest in Mobile/Modular homes that are suitable to a variety of Forest Service situations. Reduce trauma of moving from one station to another.	Not easy to get authority nor to administer program. Would require tight policy to prevent abuse.	Congressional Act.	Pre-Act. Cost of legislative proposal. Post-Act. Cost of Administration. Forest Service would have to administer.	*F.&A.M. for proposal.	
3d.	Provide official financial counselling-emphasize alternatives to "Realty" equity.	Employees could get periodic counselling at their remote location. Shows that the agency is concerned about financial well being of employees. Help reduce on-the-job worry about personal financial matters.	Could be in competition with Financial Advisors in urban areas - not usually competitive at remote rurual stations.	Could be at Forest level as part of existing concern program. May want a Regional or a National Policy Statement.	Preparation of Policy Direction. Cost of arranging or contracting for these services. Least expensive would be F.S. Employees with interest, knowledge and counselling skills.	*P.M.-Policy F&A.M.-possible resources. A.S.-Contracting.	
4.	Regional Reassignment Tenure Agreements	Would expand reassignment opportunities to Regionwide. Employees would have assurance of future locations after a remote assignment. Credibility of agreements increased with R.F., Deputy or Reg. Pers. Officer signature.	Require Regional Recording System and Commitment.	Regional Policy Direction	Preparation of Policy Statement and any operational guides. Cost of operating record keeping system	*P.M.-Policy, guides and operation	Could be a part of workforce planning system.
5.	Emergency Medical Technicians at selected stations.	Would reduce worry about lack of medical services in remote areas. F.S. image enhanced with employees and local community. Could eliminate some emergency evacuation trips at night or during bad weather when E.M.T. could handle but more than 1st aid is required.	Could take some training time or funds from other work.	Regional Policy. Is also applicable service wide.	Training time and instructor costs. Equipment & supplies costs-facilities costs (helipads, etc).	*P.M.-Policy Consultive. A. & F.M. F. & A.M. A.S. Eng.	Current authorities relative to emergency operations is considered adequate.
6.	Mitigate adverse effects of remote living.						
6a.	Commissary Services.	Help alleviate cost and inconvenience of having to travel long distances for family shopping. By quantity purchasing, employees would benefit	Would compete with local market facilities. Requires considerable administration action.	Current authority exists (act of Mar 3, 1925; 43 stat. 1133:16 USC 557.) would need new depart-	Administration Costs would be greatest. Also purchasing and transportation costs would be	*F. & A.M. Regulation Proposals & Administration Guides. A.S.-Procurement	

		CONSEQUENCES					
No.	DESCRIPTION	POSITIVE	NEGATIVE	IMPLEMENTATION LEVEL	COST ITEMS	STAFF INVOLVEMENT *-LEAD	OTHER CONSIDERATIONS
6b.	Pay mileage or allow use of Gov't. vehicles for family shopping.	Help relieve financial strain of travelling long distances for family shopping. Increase employee morale.	Operational costs would increase. Employees in other high cost of living areas would want same type benefits. Public view of family use of Gov't vehicle could be adverse to agency.	National Policy for determining "official use".	Preparation of appropriate proposals. Fairly high operational unit with remote situation. Not as high on a regional basis since only a few locations would qualify.	*F. & A.M. Proposals & Policy Statements.	
6c.	A remote location pay "differential" or "shortage category" pay.	Financial incentive to work in remote locations. Increase likelihood of employees accepting remote assignments. Assignment at employee's volition rather than organization directing the assignment.	Raise operational costs, other employees would want similar pay incentives.	Pay differential would require congressional act. Shortage category requires O.P.M. approval.	Preparation of proposals, policy statements and operational guides. Increase operational costs for units e.g. for Salmon River District based on 5/1/81 Mars Data, annual cost of $166,500.00.	*P.M.-Policy, Guides & Admn.	Review of Military pay system is appropriate. Also need to consider frequent moving costs, work set aside because of lack of staffing, etc.
7.	Require vacancy advertisements to include family living situation.	Any adverse aspects of living situation would be clearly stated for prospective employees and unit managers. No surprises after acceptance of position. Accepting employees more apt to spend less energy on living situation & more on the work at hand.	May reduce number of applications for remote location jobs.	Regional Policy	Prepare Policy Statement use existing system.	*P.M.-Policy and implementation.	
8.	Providing communal ammenities, facilities and equipment.	Supplement "Hunting & Fishing" ammenities. Further the Forest Service "Family" concept. Enhance relations with local community populace. Defray capital cost with "user fees" for some ammenities. Provide cultural education enhancement of employees and local community.	Increase in development and operational cost (partly defrayed w/user fees). Other employees wanting similar benefits.	Current authority exists (Act. of Oct. 23, 1962; 76 stat 1157:16, USC 554 d). Has Forest Service limitation of $35,000.00 need to get limitation removed.	Capital investment for each such item (Partly defrayed by user fees). Administration and operational costs. Some cost related to getting limitation removed.	*F.& A.M. for authorities. A.S., P.M., and A.M. for implementation.	Perhaps rationale used to get volunteer limitations removed are applicable. Use by local populace managed by F.S. and appropriate user fees. Some facilities could be constructed by F.S. then leased to private sector for operation and MTCE, e.g. C.A.T.V. system, etc.

No.	DESCRIPTION	CONSEQUENCES		IMPLEMENTATION LEVEL	COST ITEMS	STAFF INVOLVEMENT *-LEAD	OTHER CONSIDERATIONS
		POSITIVE	NEGATIVE				
13.	Eliminate existing permanent family residential facilities at earliest practical date in favor of Mobile facilities. e.g. only minor maintenance permitted.	Increase flexibility of agency. Simplify mtce. requirements. Make mgt. of housing facilities much easier.	Some may view as sign of instability of the agency.	Regional Policy (may want to consider on a servicewide basis).	Preparation of Policy. Could generate small amount of revenue. Capital outlay for the Mobile facility if it replaces the permanent facility. Mtce. cost/unit probable be higher. Fewer F.S. owned units.	*Engineering Policy and Implementation.	Permanent barracks could be eliminated in favor of Mobile facilities that could be moved around to meet seasonal needs.
14.	Adjust L.M.P. and A.D.V.E.N.T. elements to make them directly transferable, one to the other.	Provide a clear track from RPA targets (the work we have to do) to our proposals to do work and our allocation of resources to do work (approved plan of work)	Would require some system changes with resultant confusions that usually occur.	Servicewide Policy and Implementation	Development of Policy. Some reprogramming of one system or the other.	*PP&B/LMP Policy Proposals and reprogramming R-5. F&AM-Pamars needs.	Systems integration is vital to our efforts to become more productive.
15.	Workforce plan based on 5-year skill needs projection and accurate skills inventory of existing workforce.	This will provide a direct tie from RPA targets through LMP and advent, to workforce plans. Increase credibility of our systems. Easier to display actual needs generated by R.P.A. Decisions at the National level.	Extra work to display and analyze 5-years of advent data and building and maintaining the skills inventory.	Regional Policy (may want a servicewide policy)	Some added computing costs related to 5-year look at data at all levels. More time required for analyzing data for workforce planning - cost of skills inventory system.	*P.M.-Policy and coordination PP&B for data etc.	Only a few forests are currently including skills in their advent planning data. All would have to do it.
16.	Report, Accumulate and display skills used for MGRS. to use in evaluating work.	Provides final feedback loop needed for effective management. Allow comparison of skills used with those planned so that future work cycles can be adjusted by our experience.	Requires some changes in our processes which usually results in some confusion. Employees and supervisors may have to make more entries on payrolls if accurate use figures are desired.	National for advent and pamars changes. M.D.S.C. (Dept.) may have to be involved if changes are needed in payroll beyond what's authorized.	Design of system, programming and implementation would be fairly expensive. May take more field time to report pay items.	*F.&A.M./P.M. Policy, System design (PP&B and IRM consult.)	There are varying levels of accuracy for skills used that need to be examined.
17.	Complete "Quality Work Guides" for functional work in the region.	Help to communicate the quality expected. Is more fair to employees since quality aspects are clearly displayed at the start of work. Mgrs. will find it easier to hold employees accountable for quality work.	A lot of "initial work in developing guides. Some people are adverse to spending time on identifying quality levels because it is not easy to do (in writing).	Regional (some have already been done at national level, e.g. Eng.)	Initial development is expensive- tasks forces, etc. There are some limited costs associated with MTCE also. It's one of those investments in the future kind of thing.	R.F.-Policy. Each staff for producing good quality guides.	Where we are not currently satisfied with quality, this will help employees know what's wanted, also fits the regional office role in establishing

		CONSEQUENCES					
No.	DESCRIPTION	POSITIVE	NEGATIVE	IMPLEMENTATION LEVEL	COST ITEMS	STAFF INVOLVEMENT *-LEAD	OTHER CONSIDERATIONS
9.	Require job information referral activities as official duty requirement at remote locations.	Working Spouses would have better chance for smooth transition into new community. Enhance F.S. image as a caring employer.	Some added costs.	Regional Policy	Minimal costs related to gathering and disseminating local data.	*A.M.-Policy & Guides. P.M.-Implementation by management.	
10.	Employ spouses fulltime at selected remote locations.	Relieve financial strain on family. Improve morale of employees. Aleviate some housing needs. Further the concept of "Forest Service Family" in remote areas.	Overcoming "Nepotism" image. Administration is very touchy. Employees in non-selected areas wanting same benefits.	Chief has authority to relax existing restrictions on a case by case basis (FSM-6130).	Minimal cost - Regional effort to get special consideration.	*P.M. - Approvals and Implementation.	Could be contingent on renewed employment agreements.
11.	"Demonstrated Ability" to develop appropriate managerial climate or hire consultive skills to train unit manager on site.	Best possible managerial climate would be assured at remote locations. Organization would have to identify the appropriate climate and use an effective assessment process in selecting mgrs. for remote duty. Credibility of management performance would be increased. Remote locations would not be subject to unproven management performance.	Selection of remote location managers may become a little more difficult.	Regional Policy.	Preparation of Policy Statement. No cost unless consultive skills are required.	*P.M.-Policy and Implementation.	
12.	Build only Mobile Home Parks for any new residential facilities.	Provide needed organizational flexibility. Allows the opportunity for employees to build equity in a mobile home. Less capital outlay for the agency. F.S. would have option to supply Mobile Home facility or not.	Only office, warehouses etc. would indicate F.S. stability to local populace.	Regional Policy (Servicewide policy may be desirable)	Mobile Home Parks require less costs than fixed foundation residential facilities. When F.S. owns the mobile home the long run per unit maintenance/replacement costs would be higher than a house. Overall, F.S. would probably own fewer units. Some costs for attractive landscaped parks should be considered	*Engineering-Policy and Implementation.	Decisions to provide even Mobile Home Park facilities should consider using private sector as a first resort.

No.	DESCRIPTION	CONSEQUENCES		IMPLEMENTATION LEVEL	COST ITEMS	STAFF INVOLVEMENT *-LEAD	OTHER CONSIDERATIONS
		POSITIVE	NEGATIVE				
18.	Do not exceed the "Point of Diminishing Returns" in total expenditure of our total facilities program.	Give accurate evaluation of cost effectiveness of our total program. Decisions for long term investments would be on a much sounder base. Increase chances of congressional funding.	Would need an in-depth analysis to identify specific actions needed to accomplish this recommendation.	Regional (could be done on servicewide basis)	In-depth analysis, reporting, accumulation, analyzing and evaluation of data reported.	Engineering-Policy, analysis F&A.M. for cost reporting.	All contributed labor and costs must be included.

APPENDIX

1981 HOUSING STUDY
STUDY PLAN

I. Problem Background. It is very difficult to recruit and maintain highly qualified personnel at appropriate levels to meet production goals at certain isolated and remote administrative areas. There is a lack of available/acceptable housing, government or private. There is active community animosity toward any "government" organization in some areas. There has been a general shortage of funds for construction and/or maintenance of government housing facilities.

II. Scope. Geographically this study will address the north coast area west of I-5 and north of Clear Lake, involving the Six Rivers and parts of the Klamath, Shasta-Trinity, and Mendocino National Forests.

The systems that will most likely be involved in the study will be: Program Planning and Budgeting, Recruitment and Employment, Workload Analysis, Facilities Management, Procurement (Leasing), Organizational Structures and LMP.

Policy(ies) and decisions developed from this study may be applicable in other Regions and perhaps service-wide. There is concern in the WO about the effect of Forest Service housing on the agency's ability to meet RPA/NFMA targets.

III. Objectives

1. Provide information that can be used to develop Regional policy relative to housing, e.g., How much housing will be provided? What will constitute "adequate/acceptable" housing? Which, if any, amenities can be enhanced officially? etc. (measured by policy statements).

2. Identify the major factors, human, physical and organizational, that influence employee acceptance of housing and propose alternative ways to meet or deal with these factors. (Measured by number of factors that have proposed alternatives).

3. Forecast of workload in the next 20 years, organizational trends and major projects that may have an effect on numbers and locations of employees and/or unit headquarters or work stations. (Completed when reviews do not indicate additional items for study).

4. Identify organizational processes and systems that may affect acquisition and/or maintenance of housing units and propose alternatives that have the potential to improve the current situation. (Measured by processes and systems that have proposed alternatives for improvement).

5. Inventory the existing situation relative to workforce, location of work, available housing, both federal and private, and community situations. (Completed when reviews do not produce need for additional information).

IV. Methods

The general approach will be a comprehensive review and summarization of existing studies, GMR's, PR's and other records. WO, Regional, then Forest data will be examined. Some Ranger district information may be requested for review at the time Forest data is reviewed. On-the-ground data collection (including interviews) will only be used to fill in gaps in the data base as the need arises.

Answers to the following questions will be sought:

1. Should the Forest Service move employees into or away from certain areas? Sources - Forecasts of Workload, Organizational Trends, Major Projects and Land Management Planning impacts.

2. Which Regional policy(ies) needs to be clarified and/or changed and how? Source - Regional managers and employees perceptions and current policies relative to who should get housing, what constitutes adequate/acceptable housing, etc.?

3. What effect, if any, does the way we operate our systems have on the problem? Source - PP&B, Recruitment and Employment and Priority setting processes.

4. Which and to what extent do specific legal constraints keep the Region from dealing with the situation? Source - CFR, Manuals, discussions with various Regional and Washington Office employees relative to leasing, financial assistance, alternative ownerships, supplementing amenities and/or recreation, etc.

5. Which and to what extent, if any, do the personal values of employees about housing and community situations, play a part in the problem? Source - unit employees and managers.

6. What community relations, involvements and activities can improve the situation? Source - community residents, leaders, Forest Service employees and managers.

V. Resources. The study team will consist of the following individuals:

Dale Trail - Study leader
Pat Williams - Team member
Bob St. George - General consultant to team

Various Staff participants will be used to assist in data gathering and consultation. At this time, Engineering, PP&B, Administrative Services, F&AM, and Personnel Management are the only Staffs that may be involved other than Administrative Management. The four involved Forests may be asked to assist also.

Clerical support is estimated as follows:

Planning - 4 hours
Data Management - 40 hours
Report Preparation - 24 hours

Travel, if needed, would consist of a single trip for Trail and Williams to visit affected Ranger Districts and Forest headquarters for on-site observation, data collection and interviews. Most other activities can be handled by correspondence and telecommunications.

Non-salary costs will be mostly for travel with a small amount for miscellaneous supplies, postage, etc.

Supplies, etc.	100.00
Travel - 1800 miles	400.00
Per Diem 2 people, 10 days	1000.00
Total:	1500.00

VI. Schedule. The study will follow this schedule of events:

1. Prepare and approve Study Plan - D. Trail - by April 15, 1981.

2. Examine and summarize Regional information and conduct discussions with RO people - D. Trail, P. Williams and B. St. George - by June 1, 1981.

3. Reach agreement on the need for additional information and travel to obtain it - D. Trail, B. Graham - by June 15, 1981.

4. Collect and summarize field data - D. Trail, P. Williams - Aug. 1, 1981.

5. Analyze data and prepare report - D. Trail, P. Williams and B. St. George - by September 1, 1981.

6. Present report to Regional executives - Team and B. Graham - by September 10, 1981.

7. Monitor progress of implementation at 3 month intervals - D. Trail - by January, April, July, 1982.

VII. Approvals

Recommended	Approved
Staff Director, Admin. Mgmt.	Regional Forester
Forest Supervisor, Klamath	
Forest Supervisor, Six Rivers	
Forest Supervisor, Shasta-Trinity	
Forest Supervisor, Mendocino	

POPULATIONS
(1980 Census)

COUNTY	CITY	POPULATION 1-1-80	1-1-81
Colusa	Total	12,900	12,800
	Colusa	4,100	4,010
	Williams	1,660	1,640
	Unincorporated	7,125	7,175
Del Norte	Total	18,000	18,650
	Crescent City	3,030	3,130
	Unincorporated	14,950	15,500
Glenn	Total	21,250	21,650
	Orland	3,940	4,070
	Willows	4,770	4,950
	Unincorporated	12,550	12,650
Humbolt	Total	108,000	108,700
	Arcata	12,300	13,600
	Blue Lake	1,210	1,220
	Eureka	24,250	24,250
	Ferndale	1,360	1,400
	Fortuna	7,575	7,700
	Rio Dell	2,700	2,730
	Trinidad	370	390
	Unincorporated	58,300	57,500
Lake	Total	35,850	38,300
	Lakeport	3,670	3,740
	Unincorporated	32,200	34,550
Mendocino	Total	66,300	68,200
	Fort Bragg	5,025	5,325
	Point Arena	420	420
	Ukiah	11,950	12,150
	Willits	3,990	3,990
	Unincorporated	44,900	46,350
Shasta	Total	115,000	119,400
	Anderson	7,350	7,350
	Redding	41,450	42,800
	Unincorporated	66,200	69,300

COUNTY	CITY	POPULATION 1-1-80	POPULATION 1-1-81
Siskiyou	Total	39,500	40,950
	Dorris	850	830
	Dunsmuir	2,280	2,250
	Etna	750	770
	Fort Jones	530	540
	Montague	1,240	1,350
	Mount Shasta	2,830	2,850
	Tulelake	800	810
	Weed	2,890	2,860
	Yreka	5,900	6,125
	Unincorporated	21,450	22,550
Tehama	Total	38,350	40,100
	Corning	4,750	4,930
	Red Bluff	9,475	9,825
	Tehama	370	380
	Unincorporated	23,750	24,950
Trinity	All Unincorporated (No Incorporated Cities)	11,850	12,300

number, Southern California (especially Orange and San Diego counties) will continue to dominate growth in coming years. These two counties added half a million people *each* during the 1970s. This represented the largest increases among all California counties and accounted for nearly 27% of the state's *total* population growth during the decade.

Growth in the nine-county San Francisco Bay Area was fairly slow in the 1970s—only 1% per year. The fastest growing counties were Sonoma, Solano and, to a lesser extent, Napa and Santa Clara. It is quite clear that it's the outlying metropolitan areas in both Northern and Southern California that are attracting the greatest number of additional people. It is not a coincidence that these areas are also the fastest growing in terms of new jobs.

What's ahead for the 1980s?

All indications point to another decade of fairly hefty population growth in California. We expect the state to add about 3.8 million people—representing a growth rate of 1.5% per year. This should bring the state's population to nearly 27.5 million by 1990. As in the past, about half of the gains will be from in-migration—provided, of course, that job growth in California remains reasonably strong and the cost of homes does not skyrocket once again. At present, high housing prices are discouraging many people from relocating to California. This is only one of the many challenges which business and government will be facing in the 1980s. Meanwhile, population growth will require a continued improvement in the state's important infra-structure—roads, power facilities, water, education, fire and police protection, and the rest. However, limited financial resources, as well as the necessity to keep income and property taxes from rising sharply, will mean an urgent need for state and local governments to plan ahead and set priorities.

California's population changes: 1970-1980

(thousands of persons)

	April 1, 1980	April 1, 1970	Percent change compounded annually
SOUTHERN CALIFORNIA	13,673	11,678	1.6%
Los Angeles	7,441	7,042	0.6
Orange	1,919	1,421	3.0
San Diego	1,858	1,358	3.2
San Bernardino	877	682	2.5
Riverside	660	457	3.7
Ventura	528	378	3.4
Santa Barbara	297	264	1.2
Imperial	92	74	2.1
NORTHERN CALIFORNIA	9,840	8,298	1.7
San Francisco Bay Area	5,123	4,631	1.0
Santa Clara	1,283	1,065	1.9
Alameda	1,098	1,071	0.2
San Francisco	674	716	–0.6
Contra Costa	650	556	1.6
San Mateo	582	557	0.4
Sonoma	292	205	3.6
Solano	230	172	3.0
Marin	217	209	0.4
Napa	97	79	2.0
San Joaquin Valley	2,034	1,631	2.6
Fresno	507	413	2.1
Kern	401	330	1.9
San Joaquin	347	291	1.8
Stanislaus	266	195	3.2
Tulare	243	188	2.6
Merced	134	105	2.5
Kings	74	67	1.0
Madera	63	42	4.3
Sacramento Valley	1,329	1,053	2.4
Sacramento	780	634	2.1
Butte	143	102	3.5
Placer	117	78	4.2
Yolo	113	92	2.1
Sutter	52	42	2.2
Yuba	50	45	1.1
[redacted] Tehama	39	30	2.8
[redacted] Glenn	21	18	2.0
[redacted] Colusa	13	12	0.2
Central Coast	656	495	2.9
Monterey	289	247	1.6
Santa Cruz	187	124	4.2
San Luis Obispo	155	106	3.9
San Benito	25	18	3.2
Mountain	467	302	4.5
[redacted] Shasta	115	78	4.1
El Dorado	85	44	6.9
Nevada	52	26	7.0
[redacted] Siskiyou	40	33	1.8
Tuolumne	34	22	4.3
Lassen	22	17	6.5
Calaveras	20	14	4.2
Amador	19	12	5.0
Plumas	17	12	4.0
[redacted] Trinity	12	8	4.5
Mariposa	11	6	6.3
Modoc	9	7	1.4
Mono	9	4	7.9
Sierra	3	2	2.6
Alpine	1	0.5	8.5
Inyo	18	16	1.4
Northern Coast	230	185	2.2
[redacted] Humbolt	108	100	0.8
[redacted] Mendocino	68	51	2.7
[redacted] Lake	37	20	6.4
[redacted] Del Norte	18	15	2.2
Unallocated*	158	—	—
California Total	23,669	19,971	1.7
United States Total	226,505	203,235	1.1
California as % of U.S.	10.45	9.83	

*Residents not returning census forms but who are known to be living in California

Source: U.S. Department of Commerce. Counties may not add to region or state totals due to rounding. Percent changes computed from unrounded numbers.

Appendix 4

SECOND INTERIM PROJECTIONS
TOTAL POPULATION

County	July 1, 1980		July 1, 1985		July 1, 1990	
Alameda	1,105,400		1,125,200		1,152,900	
Alpine	1,100		1,300		1,600	
Amador	19,600		23,900		27,100	
Butte	145,500		172,600		193,800	
Calaveras	21,000		26,200		30,300	
[redacted] Colusa	12,700	+4.7%	13,300	+5.3%	14,000	(+10.2%)
Contra Costa	660,900		732,400		799,800	
[redacted] Del Norte	18,400	+13.0%	20,800	+ 10.1%	22,900	(+24.5%)
El Dorado	87,700		121,700		151,800	
Fresno	517,200		569,800		623,400	
[redacted] Glenn	21,500	+13.5%	24,400	+10.7%	27,000	(+25.6%)
[redacted] Humbolt	108,000	+ 5.0%	113,400	+ 4.6%	118,600	(+ 9.8%)
Imperial	92,900		104,800		116,100	
Inyo	17,900		19,200		20,200	
Kern	405,600		457,400		504,300	
Kings	73,700		77,600		82,000	
[redacted] Lake	36,900	+25.5%	46,300	+13.2%	52,400	(+42.0%)
Lassen	21,800		25,200		28,100	
Los Angeles	7,497,200		7,792,100		8,061,000	
Madera	63,900		79,700		92,300	
Marin	222,900		227,200		232,000	
Mariposa	11,400		14,500		16,600	
[redacted] Mendocino	67,200	+15.6%	77,700	+12.0%	87,000	(+29.5%)
Merced	135,200		150,400		164,800	
Modoc	8,600		9,400		10,000	
Mono	8,600		10,300		11,800	
Monterey	291,000		313,800		339,100	
Napa	99,100		102,100		106,300	
Nevada	52,700		73,900		90,300	
Orange	1,941,100		2,154,900		2,348,300	
Placer	118,400		147,900		173,200	
Plumas	17,600		20,800		23,600	
Riverside	671,800		809,300		935,100	
Sacramento	788,300		893,400		996,900	
San Benito	25,100		27,800		30,200	
San Bernardino	903,700		1,088,400		1,265,500	
San Diego	1,869,100		2,085,600		2,291,600	
San Francisco	678,000		667,500		660,200	
San Joaquin	349,600		389,500		430,100	
San Luis Obispo	156,500		180,600		199,400	
San Mateo	588,900		609,900		630,800	
Santa Barbara	299,500		315,400		329,400	
Santa Clara	1,300,000		1,401,500		1,502,200	
Santa Cruz	189,000		207,900		225,000	
[redacted] Shasta	116,600	+ 16.9%	136,300	+ 10.8%	151,000	(+29.5%)
Sierra	3,100		3,500		3,800	
[redacted] Siskiyou	40,000	+ 12.8%	45,100	+10.0%	49,600	(+24.0%)
Solano	238,300		294,200		342,400	
Sonoma	301,600		347,600		387,700	
Stanislaus	267,000		303,400		339,200	
Sutter	52,300		57,200		61,700	
[redacted] Tehama	39,400	+15.0%	45,300	+10.8%	50,200	(+27.4%)
[redacted] Trinity	11,900	+ 16.8%	13,900	+ 11.5%	15,500	(+30.2%)
Tulare	247,200		279,300		309,400	
Tuolumne	34,300		41,400		47,800	
Ventura	535,700		640,200		739,600	
Yolo	113,800		122,300		129,600	
Yuba	49,900		54,400		58,500	
The State	23,773,000		25,911,000		27,905,000	

Sum of counties may not equal State total due to independent rounding.

Appendix 5

EFFICIENT [1] FAMILY HOUSING CAPABILITY

Does not include X-Rated Housing-Based on 1981 Record

FOREST AND RANGER DIST.	1-BEDROOM COUPLE	2-BEDROOM COUPLE-1 child or 2 of same sex	3-BEDROOM COUPLE-2 CHILDREN of opposite sex or 2 of one and one of other sex
Klamath			
Oak Knoll	5 (5-T)	11 (8-T)	4 (1-T)
Happy Camp	4 (2-T)	4 (1-T)	5 (2-T)
Salmon River	3 (1-T)	9 (6-T)	6 (5-T)
Scott River	1	5 (1-T)	3
Ukonom	1	18 (18-T)	
KLAMATH SUBTOTAL	13 (8-T)	47 (34-T)	33 (18-T)
MENDOCINO			
Corning	2 (2-T)	4 (1-T)	2
Stonyford	3 (1-T)	4 (2-T)	7
UpperLake	0	2	1
Covelo	1 (1-T)	2	6
MENDOCINO-SUBTOTAL	6 (4-T)	12 (3-T)	16 (5-T)
SHASTA-TRINITY			
Yolla Bolla	2 (1-T)	3 (1-T)	3
Hayfork	1	6 (1-T)	6
Big Bar	3	8 (1-T)	4 (2-T)
Weaverville	2 (2-T)	2 (1-T)	7
SHASTA-TRINITY-SUBTOTAL	8 (3-T)	19 (4-T)	20 (2-T)
SIX RIVERS			
Gasquet	1 (1-T)	1	4
Orleans	1	1 (1-T)	9 (2-T)
Lower Trinity	2 (2-T)	1	2
Mad River	1 (1-T)	5 (5-T)	15 (9-T)
SIX RIVERS-SUBTOTAL	5 (4-T)	8 (6-T)	30 (11-T)
TOTAL	32 (19-T)	86 (47-T)	99 (36-T)

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[1] No more than two people in same bedroom or no children of opposite sex in same bedroom.

HOUSING STUDY MEETING SIZE STANDARDS

( )=% of Total
(Excludes Subclass "x" Structures)
(Class E or F Facilities)

UNIT	CLASS	TOTAL IN CLASS	NUMBER BELOW STANDARD SIZE	NUMBER MEET. STD. SIZE	NUMBER ABOVE STD. SIZE	AVERAGE (SQ. FT.) DEVIATION FROM NORM
KLAMATH (Excluding Goosenest & S.O.)	A	14	4 (28.6)	10 (71.4)	0 (0)	- 63.6
	B	13	1 (7.7)	12 (92.3)	0 (0)	-131.5
8.9% of Total Housing Units Classed as x on 1981 Records.	C	6	1 (16.7)	4 (66.6)	1 (16.7)	- 50.0
	D_1	8	8 (100.0)	0 (0)	9 (0)	-484.3
	D_2	34	33 (47.1)	1 (2.9)	0	-396.4
	D_3	19	7 (36.8)	6 (31.6)	6 (31.6)	- 70.6
MENDOCINO (Ex. S.O.)	A	11	0 (0)	11 (100.0)	0 (0)	+ 10.8
	B	9	1 (11.1)	8 (88.9)	0 (0)	- 73.1
5.7% of Total Housing Units Classed as x on 1981 Records.	C	2	0 (0)	1 (50.0)	1 (50.0)	+ 67.5
	D_1	4	3 (75.0)	1 (25.0)	0 (0)	-443.5
	D_2	3	3 (100.0)	0 (0)	0 (0)	-522.7
	D_3	5	5 (100.0)	0 (0)	0 (0)	-169.0

SHASTA-TRINITY (Exclude S.O., S.L., Mt. Shasta & McCloud)	A	17	4 (23.5)	10 (58.8)	3 (17.7)	+ 13.8
	B	15	8 (53.3)	7 (46.7)	0 (0)	-250.3
20.7% of Total Housing Units Classed as x on 1981 Records.	C	5	2 (40)	3 (60)	0 (0)	-117.4
	D_1	3	3 (100.0)	0 (0)	0 (0)	-371.3
	D_2	4	4 (100.0)	0 (0)	0 (0)	-478.8
	D_3	2	2 (100.0)	0 (0)	0 (0)	-342.0
SIX RIVERS (Excluding S.O.)	A	19	2 (105)	12 (63.2)	5 (26.3)	+ 94.4
	B	2	1 (500)	0 (0)	1 (50.0)	+ 41.0
9.4% of Total Housing Units Classed as x on 1981 Records.	C	1	1 (100.0)	0 (0)	0 (0)	-282.0
	D_1	5	4 (80.0)	1 (20.0)	0 (0)	-465.4
	D_2	6	5 (83.4)	1 (16.6)	0 (0)	-317.3
	D_3	11	11 (100.0)	0 (0)	0 (0)	-388.0
ENTIRE	A	61	10 (16.4)	43 (70.5)	8 (13.1)	+ 13.8
STUDY AREA	B	39	11 (28.2)	27 (69.2)	1 (2.6)	-103.5
	C	14	4 (28.6)	8 (57.1)	2 (14.3)	- 95.5
	D_1	20	18 (90.0)	2 (2.0)	0 (--)	-441.1
	D_2	47	45 (95.7)	2 (4.3)	0 (--)	-428.8
	D_3	37	25 (67.6)	6 (16.2)	6 (16.2)	-242.4
TOTAL	ALL	218	113 (51.8)	88 (40.4)	17 (7.8)	-216.25

Appendix 7

HOUSING STUDY
NATIONAL
FORTY YEAR PROGRAM RANGES
FOREST SERVICE RECOMMENDED PROGRAM

Changes From Base Year (1975)
Taken From Table 124, Pg. 651, Forest Service Final Environmental Stmt., (RPA)

SELECTED OUTPUT INDICATORS	UNIT OF MEASURE	CURRENT TREND (%)	RANGE (%)		1975 BASE YEAR	
			HIGH	LOW	ACCUM. 4 YRS.	ANNUAL*
Recreation Use-Developed	Mil. RVD	+5	+11	+4	290.0	72.8
Recreation Use-Dispersed	Mil. RVD	+5	+10	+2	502.8	125.0
Wilderness Maintained	Mil. Ac.	--	+27	+27	12.0	12.0
Wildlife Habitat Improv.	Thous. Ac.	+213	+317	+287	728	175
Fish Habitat Improv.	Thous. Ac.	+168	+318	+281	16	4
Livestock Graze - N.F.S.	Mil. AUM's	--	+23	+15	45.2	11.3
Livestock Graze - S&PF	Mil. AUM's	0	+6	-3	236.4	59.1
Potential Timber Yield-N.F.S.	Bil. Cu. Ft.	0	+7	0	20.8	2.7
Timber Sale Offer. N.F.S.	Bil. Cu. Ft.	+7	+13	+9	9.6	2.4
Timber Util. Improv.	% Increase	+13	+15.5	+14.5	0	5
Pot. Tbr. Yield-Non-Indust.	Bil. Cu. Ft.	+5	+14	+7	30.0	7.5
Water Quality	Mil. Ac. Ft.	0	+5	-1	5,492	1,373

Lands Acquir. & Exchanged	Thous. Ac.	+100	+106	+92	415.2	--
(Tbr. Sale Road Const. & Reconst).	(Miles)	(+1,421)	(+1,028)	(+947)	(468)	(--)
(Purch. Road Const. & Reconst.	(Miles)	(+16)	(+25)	(+17)	(27,464)	(--)
Total Road Const. & Reconst.	Miles	+45	+47	+32	27,932	--
Receipts To Treasury	Mil. $	+4	+11	+4	2,327.2	581.8
Personnel Required	Thous. Per. Yrs.	+38	+44	+36	144	36**
Total Costs	Mil. $	+39	+60	+50	4,015.4	1,003.8

* Taken from Appendix of RPA Summary Document 2/76.

** Following Taken/Calculated from Table 114, Page 628, Final RPA Env. Stmt.

Fire Prevention - N.F.S.	No. Man Caused Fires	-4	-27	-10		6990
Fire Suppression - S&PF	No. Per Mil. Ac. Protected	+5	-14	+6		216

Following Taken/Calculated from Table 121, Page 644, Final RPA Env. Stmt.

Fire Suppression (Burn Lvel NFS)	Thous. Acres	-2	-57	-47		208
Fuel Management	Thous. Acres	-33	+250	+205		382
Erosion & Non Point Poll. Prev.	Thous. Acres	+307	+2329	+1906		34
Soil Productivity Imprv.	Thous. Acres.	+682	+3760	+3076		110

Klamath

TABLE 12

PROJECTED NATIONAL FOREST SYSTEM PROGRAM OUTPUTS AND ACTIVITIES
RPA 1980 RECOMMENDED PROGRAM - REGION 5
KLAMATH NATIONAL FOREST

Program element, activity, and unit of measure	% of FTE ADVENT ELEM	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
RECREATION Dev Rec Use (inc VIS) MM RVD	2.13 A	0.11	0.11	0.13	0.14	0.14	0.15	0.15	0.18	0.20
Disp Rec Use (inc WL & Fish) MM RVD	0.89 B	0.56	0.58	0.60	0.61	0.64	0.68	0.63	0.77	0.80
Trail Const/Recon MILES	0.02 (2%) L	43	44	43	37	39	41	34	35	36
WILDLIFE & FISH Wildlife Hab Imp M ACRE EQUIV	1.23 C	27.20	28.60	28.60	28.60	25.40	21.70	16.90	11.00	10.90
Anad. Fish Imp M LBS	0.01 C	0	7	23	57	153	330	349	349	349
RANGE Grazing Use (Livestock) - M AUM	0.89 D	33.0	33.3	33.7	34.0	34.0	34.5	35.0	35.4	35.8
TIMBER Prog. Sales Off. MM BOARD FEET	72.44 E	265.0	270.0	275.0	281.9	281.9	281.9	300.7	300.7	300.7
Reforestation ACRES	4.34 M	10268	10445	10622	10622	10622	11506	12391	12391	12391
Timber Stand Imp ACRES	0.89 R	4200	4200	4050	4350	4850	4945	4945	4945	4945
WATER Meeting Qual. Goals M ACRE FEET	0.71 F	3684	3684	3694	3704	3724	3764	3764	3764	3764
MINERALS Leases & Permits OPERATING PLANS	0.46 G	61	61	62	66	70	74	83	88	90
H&CD Human Res. Prog. ENROLLEE YEARS	0.18 H	64	64	64	64	9	9	9	9	9
PROTECTION Fuelbreaks & Fuel Treatment - ACRES	13.30 P	4700	4500	4600	4600	3600	3700	3600	3300	3300
LANDS Purch. & Acq. (exc Exch) - ACRES	1.08 J	1500	1500	500	1000	1000	0	0	0	0
SOILS Soil & Wtr Res Imp Imp WS Cond - ACRES	0.44 K, V	410	410	430	530	390	430	430	440	440
FACILITIES Rd. Const/Reconst (Art & Coll) MILES	0.99 L	18	21	21	23	24	42	31	31	19
TOTAL FOREST COST (MM $) Appropriated		21.58	22.19	22.78	23.21	25.73	26.81	27.87	28.08	27.67

M = Thousand MM = Million

TABLE 15 Mendocino

PROJECTED NATIONAL FOREST SYSTEM PROGRAM OUTPUTS AND ACTIVITIES
RPA 1980 RECOMMENDED PROGRAM - REGION 5.
MENDOCINO NATIONAL FOREST

Program element, activity, and unit of measure	% of FTE ADVENT ELEM.	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
RECREATION Dev Rec Use (inc VIS) MM RVD	3.63 A	0.20	0.22	0.24	0.25	0.26	0.28	0.25	0.34	0.37
Disp Rec Use (inc WL & Fish) MM RVD	0.40 B	0.45	0.53	0.56	0.58	0.64	0,81	0.59	0.62	0.68
Trail Const/Recon MILES	0.04 L (2%)	20	20	19	17	18	19	16	16	16
WILDLIFE & FISH Wildlife Hab Imp M ACRE EQUIV	1.01 C	21.76	22.88	22.88	22.88	20.32	17.36	13.52	8.80	8.72
Anad. Fish Imp M LBS	0.01 C	0	2	6	14	39	89	95	95	95
RANGE Grazing Use (Livestock) - M AUM	0.36 D	16.0	16.2	16.4	16.5	16.5	16.7	17.0	17.2	17.4
TIMBER Prog. Sales Off. MM BOARD FEET	55.47 E	90.0	90.0	90.0	92.4	92.4	92.4	98.6	98.6	98.6
Reforestation ACRES	4.17 M	1020	1037	1054	1054	1054	1144	1232	1232	1232
Timber Stand Imp ACRES	0.40 R	2857	2857	2807	2907	3057	3117	3117	3117	3117
WATER Meeting Qual. Goals M ACRE FEET	0.54 F	1468	1468	1472	1476	1484	1500	1500	1500	1500
MINERALS Leases & Permits OPERATING PLANS	0.09 G	5	6	8	8	8	9	10	11	12
H&CD Human Res. Prog. ENROLLEE YEARS	0.01 H	55	55	55	55	7	7	7	7	7
PROTECTION Fuelbreaks & Fuel Treatment - ACRES	30.83 P	2900	2700	2700	2700	2100	2200	2100	2000	2000
LANDS Purch. & Acq. (exc Exch) - ACRES	0.83 J	0	0	500	500	0	0	0	0	0
SOILS Soil & Wtr Res Imp. Imp WS Cond - ACRES	0.44 K,V	320	320	340	440	300	330	340	340	340
FACILITIES Rd. Const/Reconst (Art & Coll) MILES	1.77 L	6	8	8	10	10	15	10	10	4
TOTAL FOREST COST (MM $) Appropriated		10.99	11.18	11.37	11.58	13.14	13.80	14.28	14.41	14.15

ADVENT elements S,T and X were redistributed to other elements.
M = Thousand MM = Million

TABLE 21

PROJECTED NATIONAL FOREST SYSTEM PROGRAM OUTPUTS AND ACTIVITIES
RPA 1980 RECOMMENDED PROGRAM - REGION 5
SHASTA-TRINITY NATIONAL FOREST

Program element, activity, and unit of measure	% of FTE ADVENT ELEM	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
RECREATION Dev Rec Use (inc VIS) MM RVD	8.68 A	1.32	1.38	1.44	1.50	1.55	1.66	1.76	2.03	2.24
Disp Rec Use (inc WL & Fish) MM RVD	0.16 B	3.71	3.65	3.82	3.85	4.02	4.02	4.16	4.41	4.82
Trail Const/Recon MILES	0.08 L(2%)	48	49	48	41	43	46	38	39	40
WILDLIFE & FISH Wildlife Hab Imp M ACRE EQUIV	0.47 C	10.88	11.44	11.44	11.44	10.16	8.68	6.76	4.40	4.36
Anad. Fish Imp M LBS	0.01 C	0	5	18	43	116	249	261	261	261
RANGE Grazing Use (Livestock) - M AUM	0.43 D	8.0	8.1	8.2	8.3	8.3	8.4	8.5	8.6	8.7
TIMBER Prog. Sales Off. MM BOARD FEET	54.61 E	260.0	265.0	270.0	300.0	308.0	316.0	337.1	337.1	337.1
Reforestation ACRES	1.65 M	13599	13834	14067	14067	14067	15238	16410	16410	16410
Timber Stand Imp ACRES	0.07 R	8000	8000	7850	8150	8650	8820	8820	8820	8820
WATER Meeting Qual. Goals M ACRE FEET	2.20 F	8578	8578	8601	8625	8671	8765	8765	8765	8765
MINERALS Leases & Permits OPERATING PLANS	0.19 G	135	137	142	147	156	166	185	197	201
H&CD Human Res. Prog. ENROLLEE YEARS	1.71 H	164	164	164	164	11	11	11	11	11
PROTECTION Fuelbreaks & Fuel Treatment - ACRES	23.85 P	4000	3800	3900	3900	3400	3500	3300	2800	2900
LANDS Purch. & Acq. (exc Exch) - ACRES	1.64 J	4500	3500	3000	3000	3000	0	0	0	0
SOILS Soil & Wtr Res Imp Imp WS Cond - ACRES	0.29 K, V	540	540	560	660	520	570	580	590	590
FACILITIES Rd. Const/Recons̶t (Art & Coll) MILES	3.96 L	20	23	23	26	26	42	35	35	19
TOTAL FOREST COST (MM $) Appropriated		27.76	28.64	29.49	31.51	36.44	38.85	40.16	40.53	39.81

ADVENT elements T and X were redistributed to other elements.
M = Thousand MM = Million

Six Rivers

TABLE 17

PROJECTED NATIONAL FOREST SYSTEM PROGRAM OUTPUTS AND ACTIVITIES
RPA 1980 RECOMMENDED PROGRAM - REGION 5
SIX RIVERS NATIONAL FOREST

Program element, activity, and unit of measure	% of FTE ADVENT ELEM	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
RECREATION Dev Rec Use (inc VIS) MM RVD	1.70 A	0.17	0.18	0.19	0.20	0.20	0.22	0.21	0.27	0.30
Disp Rec Use (inc WL & Fish) MM RVD	0.05 B	0.30	0.30	0.32	0.31	0.34	0.36	0.38	0.41	0.45
Trail Const/Recon MILES	0.03 L(2%)	13	13	13	11	12	13	10	10	11
WILDLIFE & FISH Wildlife Hab Imp M ACRE EQUIV	1.04 C	8.16	8.58	8.58	8.58	7.62	6.51	5.07	3.30	3.27
Anad. Fish Imp M LBS	0.01 C	0	4	16	39	105	225	240	240	240
RANGE Grazing Use (Livestock) - M AUM	0.16 D	10.0	10.1	10.2	10.3	10.3	10.5	10.6	10.7	10.9
TIMBER Prog. Sales Off. MM BOARD FEET	78.65 E	160.0	170.0	177.0	199.5	229.0	256.0	273.1	273.1	273.1
Reforestation ACRES	2.88 M	3996	4065	4134	4134	4134	4429	4823	4823	4823
Timber Stand Imp ACRES	1.65 R	3428	3428	3378	3478	3728	3801	3801	3801	3801
WATER Meeting Qual. Goals M ACRE FEET	0.65 F	4902	4902	4915	4928	4955	5008	5008	5008	5008
MINERALS Leases & Permits OPERATING PLANS	0.09 G	52	52	54	56	60	63	70	75	76
H&CD Human Res. Prog. ENROLLEE YEARS	0.01 H	50	50	50	50	7	7	7	7	7
PROTECTION Fuelbreaks & Fuel Treatment - ACRES	10.27 P	4400	4200	4300	4200	3500	3600	3400	3100	3100
LANDS Purch. & Acq. (exc Exch) - ACRES	0.81 J	0	0	0	0	0	0	0	0	0
SOILS Soil & Wtr Res Imp Imp WS Cond - ACRES	0.49 K, V	410	410	430	530	390	430	430	440	440
FACILITIES Rd. Const/Reconst (Art & Coll) MILES	1.51 L	18	21	21	24	25	42	31	31	19
TOTAL FOREST COST (MM $) Appropriated		20.67	21.89	22.83	25.04	30.08	33.61	35.16	35.36	34.96

ADVENT elements T and X were redistributed to other elements.
M = Thousand MM = Million

FTE's BY ADVENT
ELEMENT BY FOREST

	KLAMATH		MENDOCINO		SIX RIVERS		SHASTA-TRINITY	
ELEMENT	FTE	%	FTE	%	FTE	%	FTE	%
A	12.00	2.13	10.00	3.63	6.70	1.75	68.82	8.68
B	5.00	0.89	1.10	0.40	—	—	1.24	0.16
C	7.00	1.24	2.80	1.02	4.00	1.05	3.84	0.48
D	5.00	0.89	1.00	0.36	.60	0.16	3.39	0.43
E	408.60	72.44	153.00	55.48	300.85	78.66	432.79	54.61
F	4.00	0.71	1.50	0.54	2.50	0.65	17.40	2.20
G	2.60	0.46	.26	0.09	.33	0.09	1.49	0.19
H	1.00	0.18	—	—	—	—	13.56	1.71
J	6.10	1.08	2.30	0.83	3.10	0.81	13.00	1.64
K	2.50	0.44	1.20	0.44	1.87	0.49	2.26	0.29
L	5.70	1.01	5.00	1.81	5.90	1.54	31.99	4.04
M	24.50	4.34	11.50	4.17	11.00	2.88	13.11	1.65
P	75.00	13.30	85.00	30.83	39.30	10.27	189.05	23.85
R	5.00	0.89	1.10	0.40	6.30	1.65	.57	0.07
S*	—		2.50		—		—	
T*	81.00		55.00		94.50		91.53	
V**	1.00		—		.27		—	
X*	5.00		9.00		6.50		6.55	
TOTAL	564.00 + 86.00 650.00	100.00	275.76 + 66.50 342.26	100.00	382.45 + 101.00 483.45	100.00	792.51 + 98.08 890.59	100.00

* - Redistributed to Other Elements

** - Combined with Soils

RESOURCE ELEMENTS

A - Recreation

B - Wilderness

C - Wildlife & Fish.

D - Range

E - Timber

F - Water

G - Minerals

H - Human and Community Development

J - Lands

K - Soils

L - Facilities

M - Reforestation

P - Protection

R - T.S.I.

S - Chaparral Mgmt. - Redistributed

T - Gen. Admin. - Redistributed

V - Geology (Combine w/Soils)

X - LMP - Redistributed

DISTRICT % RELATIONSHIP TO FOREST TOTAL KLAMATH

	OUTPUTS BY UNITS				
Element- Meas.	Oak Knoll	Happy Camp	Salmon River	Scott River	Ukonom
Dev. Rec. Use (RVD)	18	19	9	16	23
Disp. Rec. Use (RVD)	19	6	11	29	31
Trail Const/Reconst. (Mi)	11	14	44	22	10
Wldlfe & Fish Hab Imp. (Ac. Equiv.)	14	19	24	10	14
Anadromous Fish (M-LBS)	20	20	29	10	21
Grazing Use (M-AUM)	22	1	7	20	2
Sales Offer. (M-MBF)	16	29	19	8	10
Reforestation (Ac)	10	11	33	2	22
Tmbr. Std. Imp. (Ac)	16	29	19	8	10
Meet. Qual. Wtr. Gls. (M-Ac.Ft)	14	19	24	10	14
Min. Lses & Pmt's (Op. Plans)	21	21	27	19	6
H & C.D. (Enrollee years)	14	14	14	14	14
Fuel Bks./Treat. (Ac)	11	30	31	5	7
Purch. & Acquis. Excld. Exchs. (Ac)	39	8	9	24	4
Soil & Ntr. Res. Imp. (Ac)	18	8	10	29	19
Road Const./Reconst. Art. & (Occ.) (Mi)	27	18	11	13	8

Percent of Forest Total

Basic data supplied by S.O. - for obvious areas of unrealistic relationships, percentages developed by other means.

DISTRICT % RELATIONSHIP TO FOREST TOTAL MENDOCINO

Element- Meas.	OUTPUTS BY UNITS			
	Corning	Stonyford	Upper Lake	Covelo
Dev. Rec. Use (RVD)	6	38	49	7
Disp. Rec. Use (RVD)	22	27	30	21
Trail Const/Reconst. (Mi)	9	28	17	46
Wldlfe & Fish Hab Imp. (Ac. Equiv.)	19	28	30	23
Anadromous Fish (M-LBS)	0	0	50	50
Grazing Use (M-AUM)	12	28	12	48
Sales Offer. (M-MBF)	30	21	29	20
Reforestation (Ac)	47	17	16	19
Tmbr. Std. Imp. (Ac)	56	13	22	9
Meet. Qual. Wtr. Gls. (M-Ac.Ft)	25	25	25	25
Min. Lses & Pmt's (Op. Plans)	19	28	30	23
H & C.D. (Enrollee years)	33	34	20	13
Fuel Bks./Treat. (Ac)	31	49	9	11
Purch. & Acquis. Excld. Exchs. (Ac)	34	20	33	13
Soil & Ntr. Res. Imp. (Ac)	20	29	21	30
Road Const./Reconst. Art. & (Occ.) (Mi)	33	30	25	12

Percent of Forest Total

DISTRICT % RELATIONSHIP TO FOREST TOTAL SHASTA-TRINITY

Element- Meas.	OUTPUTS BY UNITS Y.B.	Hay.	B.B.	Wv.
Dev. Rec. Use (RVD)	2	3	7	25
Disp. Rec. Use (RVD)	13	6	14	11
Trail Const/Reconst. (Mi)	35	3	27	24
Wldlfe & Fish Hab Imp. (Ac. Equiv.)	23	12	19	6
Anadromous Fish (M-LBS)	0	45	55	0
Grazing Use (M-AUM)	12	13	5	1
Sales Offer. (M-MBF)	11	19	11	13
Reforestation (Ac)	4	26	4	2
Tmbr. Std. Imp. (Ac)	11	19	11	13
Meet. Qual. Wtr. Gls. (M-Ac.Ft)	22	1	36	19
Min. Lses & Pmt's (Op. Plans)	2	2	22	15
H & C.D. (Enrollee years)	1	2	1	11
Fuel Bks./Treat. (Ac)	21	26	9	31
Purch. & Acquis. Excld. Exchs. (Ac)	4	5	17	19
Soil & Ntr. Res. Imp. (Ac)	14	7	14	10
Road Const./Reconst. Art. & (Occ.) (Mi)	13	23	3	12

Percent of Forest Total

DISTRICT % RELATIONSHIP TO FOREST TOTAL SIX RIVERS

		OUTPUTS BY UNITS			
Element-	Meas.	Gasquet	Orleans	Lower Trinity	Mad River
Dev. Rec. Use	(RVD)	39	26	30	5
Disp. Rec. Use	(RVD)	46	32	16	6
Trail Const/Reconst.	(Mi)	21	18	7	54
Wldlfe & Fish Hab Imp.	(Ac. Equiv.)	36	21	19	24
Anadromous Fish	(M-LBS)	25	26	28	21
Grazing Use	(M-AUM)	0	0	16	84
Sales Offer.	(M-MBF)	17	29	31	23
Reforestation	(Ac)	16	38	24	22
Tmbr. Std. Imp.	(Ac)	24	40	16	20
Meet. Qual. Wtr. Gls.	(M-Ac.Ft)	31	23	17	29
Min. Lses & Pmt's	(Op. Plans)	9	6	38	47
H & C.D.	(Enrollee years)	26	23	31	3
Fuel Bks./Treat.	(Ac)	21	25	32	22
Purch. & Acquis. Excld. Exchs.	(Ac)	25	5	33	37
Soil & Ntr. Res. Imp.	(Ac)	36	21	19	24
Road Const./Reconst. Art. & (Occ.)	(Mi)	24	24	20	32

Percent of Forest Total

Appendix 10

KLAMATH FOREST
OAK KNOLL DISTRICT PROJECTED TARGETS

OUTPUT	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
Recr. - Dev.	18) 0.020	0.020	0.023	0.025	0.025	0.027	0.027	0.032	0.36
Recr. - Disp.	19) 0.106	0.110	0.114	0.116	0.122	0.129	0.120	0.146	0.152
Trails	11) 4.7	4.8	4.7	4.1	4.3	4.5	3.7	3.9	4.0
Wild. & Fish Habitat	14) 3.81	4.00	4.00	4.00	3.56	3.04	2.37	1.54	1.53
Anad. Fish Imp.	20) 0	1.4	4.6	11.4	30.6	66.0	69.8	69.8	69.8
Range	22) 7.3	7.3	7.4	7.5	7.5	7.6	7.7	7.8	7.9
Tmbr. Sales Offered	16) 42.4	43.4	44.0	45.1	45.1	45.1	48.1	48.1	48.1
Reforest	10) 1027	1045	1062	1062	1062	1151	1239	1239	1239
T.S.I.	16) 672	672	648	696	776	791	791	791	791
Water	14) 516	516	517	519	521	527	527	527	527
Minerals	21) 13	13	13	14	15	16	17	18	19
H. & C.D.	14) 9.0	9.0	9.0	9.0	1.3	1.3	1.3	1.3	1.3
Protection	11) 517	495	506	506	396	407	396	363	363
Lands	39) 585	585	195	390	390	0	0	0	0
Soils	18) 74	74	77	95	70	77	77	79	79
Roads	27) 4.9	5.7	5.7	6.2	6.5	11.3	8.4	8.4	5.1
Total	3476.236	3475.730	3097.537	3369.441	3329.007	3107.996	3188.517	3158.018	3155.918
Projected FTE's	92.7*	92.7	82.6	89.9	88.8	82.9	85.0	84.2	84.2
TOTAL FOR COST									

37.50 units/FTE.

*—Same as 1981 Allocation

Appendix 10

KLAMATH FOREST
HAPPY CAMP DISTRICT PROJECTED TARGETS

OUTPUT	1982	1983	1984	1986-1985	1991-1990	2001-2000	2011-2010	2021-2020	2030
Recr. - Dev.	19) 0.021	0.021	0.025	0.027	0.027	0.029	0.029	0.034	0.038
Recr. - Disp.	6) 0.034	0.035	0.036	0.037	0.038	0.041	0.038	0.046	0.048
Trails	14) 6.0	6.2	6.0	5.2	5.5	5.7	4.8	4.9	5.0
Wild. & Fish Habitat	19) 5.17	5.43	5.43	5.43	4.83	4.12	3.21	2.09	2.07
Anad. Fish Imp.	20) 0	1.4	4.6	11.4	30.6	66.0	69.8	69.8	69.8
Range	1) 0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4
Tmbr. Sales Offered	29) 76.9	78.3	79.8	81.8	81.8	81.8	87.2	87.2	87.2
Reforest	11) 1129	1149	1168	1168	1168	1266	1363	1363	1363
T.S.I.	29) 1218	1218	1174	1262	1407	1434	1434	1434	1434
Water	19) 700	700	702	704	708	708	708	708	708
Minerals	21) 13	13	13	14	15	16	17	18	19
H. & C.D.	14) 9.0	9.0	9.0	9.0	1.0	1.0	1.0	1.0	1.0
Protection	30) 1410	1350	1380	1380	1080	1110	1080	990	990
Lands	8) 120	120	40	80	80	0	0	0	0
Soils	8) 33	33	34	42	31	34	34	35	35
Roads	18) 3.2	3.8	3.8	4.1	4.3	7.6	5.6	5.6	3.4
Total	4723.625	4687.486	4619.991	4767.294	4617.395	4734.690	4808.077	4719.070	4717.956
Projected FTE's	91.4*	90.7	89.4	92.2	89.3	91.6	93.0	91.3	91.3
TOTAL FOR COST									

51.68 Units/FTE

*—Same as 1981 Allocation

Appendix 10

KLAMATH FOREST
SALMON RIVER DISTRICT PROJECTED TARGETS

OUTPUT	1982	1983	1984	1986-1985	1991-1990	2001-2000	2011-2010	2021-2020	2030
Recr. - Dev.	9) 0.010	0.010	0.012	0.013	0.013	0.014	0.014	0.016	0.018
Recr. - Disp.	11) 0.062	0.064	0.066	0.067	0.070	0.075	0.069	0.085	0.088
Trails	44) 18.9	19.4	18.9	16.3	17.2	18.0	15.0	15.4	15.8
Wild. & Fish Habitat	24) 6.53	6.86	6.86	6.86	6.10	5.21	4.06	2.64	2.62
Anad. Fish Imp.	29) 0	2.0	6.7	16.5	44.4	95.7	101.2	101.2	101.2
Range	7) 2.3	2.3	2.4	2.4	2.4	2.4	2.5	2.5	2.5
Tmbr. Sales Offered	19) 50.4	51.3	52.3	53.6	53.6	53.6	57.1	57.1	57.1
Reforest	33) 3388	3447	3505	3505	3505	3797	4089	4089	4089
T.S.I.	19) 798	798	770	827	922	940	940	940	940
Water	24) 884	884	887	887	894	903	903	903	903
Minerals	27) 16	16	17	18	19	20	22	24	24
H. & C.D.	14) 9.0	9.0	9.0	9.0	1.3	1.3	1.3	1.3	1.3
Protection	31) 1457	1395	1426	1426	1116	1147	1116	1023	1023
Lands	9) 135	135	45	90	90	0	0	0	0
Soils	10) 41	41	43	53	39	43	43	44	44
Roads	11) 2.0	2.3	2.3	2.5	2.6	4.6	3.4	3.4	2.1
Total	6808.202	6809.234	6791.538	6913.240	6712.683	7030.899	7297.643	7206.641	7205.726
Projected FTE's	64.7*	64.7	64.5	65.7	63.8	66.8	69.3	68.5	68.5
TOTAL FOR COST									

105.23 Units/FTE

*—Same as 1981 Allocation

KLAMATH FOREST
SCOTT RIVER DISTRICT PROJECTED TARGETS

OUTPUT	1982	1983	1984	1985	1986–1990	1991–2000	2001–2010	2011–2020	2021–2030
Recr. – Dev.	16) 0.018	0.018	0.021	0.022	0.022	0.024	0.024	0.029	0.032
Recr. – Disp.	29) 0.162	0.168	0.174	0.177	0.186	0.197	0.183	0.223	0.232
Trails	22) 9.5	9.7	9.5	8.1	8.6	9.0	7.5	7.7	7.9
Wild. & Fish Habitat	10) 2.72	2.86	2.86	2.86	2.54	2.17	1.69	1.10	1.09
Anad. Fish Imp.	10) 0	.7	2.3	5.7	15.3	33.0	34.9	34.9	34.9
Range	20) 6.6	6.7	6.7	6.8	6.8	6.9	7.0	7.1	7.2
Tmbr. Sales Offered	8) 21.2	21.6	22.0	22.6	22.6	22.6	24.1	24.1	24.1
Reforest	2) 205	209	212	212	212	230	248	248	248
T.S.I.	8) 336	336	324	348	388	396	396	396	396
Water	10) 368	368	369	370	372	376	376	376	376
Minerals	19) 12	12	12	13	13	14	16	17	17
H. & C.D.	14) 9	9	9	9	1	1	1	1	1
Protection	5) 235	225	230	230	180	185	180	165	165
Lands	24) 360	360	120	240	240	0	0	0	0
Soils	29) 119	119	125	154	113	125	125	128	128
Roads	13) 2.3	2.7	2.7	3.0	3.1	5.5	4.0	4.0	2.5
Total	1686.500	1682.446	1447.255	1625.259	1578.148	1406.391	1421.397	1410.152	1408.954
Projected FTE's	80.8*	80.6	69.3	77.9	75.6	67.4	68.1	67.6	67.5
TOTAL FOR COST									

20.87 Units/FTE

*—Same as 1981 Allocation

Appendix 10

KLAMATH FOREST
UKONOM DISTRICT PROJECTED TARGETS

OUTPUT	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
Recr. - Dev.	23) 0.025	1.025	0.030	0.032	0.032	0.035	0.035	0.041	0.046
Recr. - Disp.	31) 0.174	0.180	0.186	0.189	0.198	0.211	0.195	0.239	0.248
Trails	10) 4.3	4.4	4.3	3.7	3.9	4.1	3.4	3.5	3.6
Wild. & Fish Habitat	14) 3.81	4.00	4.00	4.00	3.56	3.04	2.37	1.54	1.53
Anad. Fish Imp.	21) 0	1.5	4.8	12.0	32.3	69.3	73.3	73.3	73.3
Range	2) 0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Tmbr. Sales Offered	10) 26.5	27.0	27.5	28.2	28.2	28.2	30.1	30.1	30.1
Reforest	22) 2559	2298	2337	2337	2337	2531	2726	2726	2726
T.S.I.	10) 420	420	405	435	485	495	495	495	495
Water	14) 516	516	517	519	521	527	527	527	527
Minerals	6) 4	4	4	4	4	4	5	5	5
H. & C.D.	14) 9	9	9	9	1	1	1	1	1
Protection	7) 329	315	322	322	252	259	252	231	231
Lands	4) 60	60	20	40	40	0	0	0	0
Soils	19) 78	78	82	101	74	82	82	84	84
Roads	8) 1.4	1.7	1.7	1.8	1.9	3.4	2.5	2.5	1.5
Total	4011.909	3739.505	3739.216	3817.621	3784.790	4007.986	4200.600	4180.920	4180.024
Projected FTE's	64.1*	59.7	59.7	61.0	60.5	64.0	67.1	66.8	66.8
TOTAL FOR COST									

62.59 Units/FTE

*—Same as 1981 Allocation

Appendix 10

MENDOCINO FOREST
CORNING DISTRICT PROJECTED TARGETS

OUTPUT	1982	1983	1984	1985	1986–1990	1991–2000	2001–2010	2011–2020	2021–2030
Recr. – Dev.	6) 0.012	0.013	0.014	0.015	0.016	0.017	0.015	0.020	0.022
Recr. – Disp.	22) 0.099	0.117	0.123	0.128	0.141	0.178	0.130	0.136	0.150
Trails	9) 1.8	1.8	1.7	1.5	1.6	1.7	1.4	1.4	1.4
Wild. & Fish Habitat	19) 4.13	4.36	4.36	4.36	3.86	3.30	2.57	1.67	1.66
Anad. Fish Imp.	0) 0	0	0	0	0	0	0	0	0
Range	12) 1.92	1.94	1.97	1.98	1.98	2.00	2.04	2.06	2.09
Tmbr. Sales Offered	30) 27.0	27.0	27.0	27.7	27.7	27.7	29.6	29.6	29.6
Reforest	47) 479	487	495	495	495	538	579	579	579
T.S.I.	56) 1600	1600	1572	1628	1712	1746	1746	2723	2723
Water	25) 367	367	368	369	371	375	375	375	375
Minerals	19) 1	1	2	2	2	2	2	2	2
H. & C.D.	33) 18.15	18.15	18.15	18.15	2.31	2.31	2.31	2.31	2.31
Protection	31) 899	837	837	837	651	682	651	620	620
Lands	34) 0	0	170	170	0	0	0	0	0
Soils	20) 64	64	68	88	60	66	68	68	68
Roads	33) 1.98	2.64	2.64	3.30	3.30	4.95	3.30	3.30	1.32
Total	3465.091	3412.020	3567.957	3646.133	3331.907	3451.155	3462.365	3430.496	3428.552
Projected FTE's	42.59*	41.94	43.85	44.81	40.95	42.42	42.56	42.16	42.14
TOTAL FOR COST									

81.36 Units/FTE

*—Same as 1981 Allocation

MENDOCINO FOREST
STONYFORD DISTRICT PROJECTED TARGETS

OUTPUT	1982	1983	1984	1985	1986–1990	1991–2000	2001–2010	2011–2020	2021–2030
Recr. - Dev.	38) 0.076	0.084	0.091	0.095	0.099	0.106	0.095	0.129	0.141
Recr. - Disp.	27) 0.122	0.143	0.151	0.157	0.173	0.219	0.159	0.167	0.184
Trails	28) 5.60	5.60	5.32	4.76	5.04	5.32	4.48	4.48	4.48
Wild. & Fish Habitat	28) 6.10	6.41	6.41	6.41	5.69	4.86	3.79	2.46	2.44
Anad. Fish Imp.	0) 0	0	0	0	0	0	0	0	0
Range	28) 4.48	4.54	4.59	4.62	4.62	4.68	4.76	4.82	4.87
Tmbr. Sales Offered	21) 18.9	18.9	18.9	19.4	19.4	19.4	20.7	20.7	20.7
Reforest	17) 173.4	176.3	179.2	179.2	179.2	194.5	209.4	209.4	209.4
T.S.I.	13) 371.4	371.4	364.9	377.9	397.4	405.2	405.2	405.2	405.2
Water	25) 367	367	368	369	371	375	375	375	375
Minerals	28) 1	2	2	2	2	3	3	3	3
H. & C.D.	34) 18.7	18.7	18.7	18.7	2.4	2.4	2.4	2.4	2.4
Protection	49) 1421	1323	1323	1323	1029	1078	1029	980	980
Lands	20) 0	0	100	100	0	0	0	0	0
Soils	29) 92.8	92.8	98.6	127.6	87.0	95.7	98.6	98.6	98.6
Roads	30) 1.8	2.4	2.4	3.0	3.0	4.5	3.0	3.0	1.2
Total	2482.378	2389.277	2492.262	2535.842	2106.022	2192.885	2159.584	2109.356	2107.615
Projected FTE's	*70.43	67.78	70.70	71.94	59.74	62.21	61.26	59.84	59.79
TOTAL FOR COST									

35.25 Units/FTE

*—Same as 1981 Allocation

Appendix 10

MENDOCINO FOREST
UPPER LAKE DISTRICT PROJECTED TARGETS

OUTPUT	1982	1983	1984	1985	1986–1990	1991–2000	2001–2010	2011–2020	2021–2030
Recr. - Dev.	49) 0.098	0.108	0.118	0.123	0.127	0.137	0.123	0.167	0.181
Recr. - Disp.	30) 0.135	0.159	0.168	0.174	0.192	0.243	0.177	0.186	0.204
Trails	17) 3.4	3.4	3.2	2.9	3.1	3.2	2.7	2.7	2.7
Wild. & Fish Habitat	30) 6.53	6.86	6.86	6.86	6.10	5.21	4.06	2.64	2.62
Anad. Fish Imp.	50) 0	1.0	3.0	7.0	19.5	44.5	47.5	47.5	47.5
Range	12) 1.92	1.94	1.97	1.98	1.98	2.00	2.04	2.06	2.09
Tmbr. Sales Offered	29) 26.1	26.1	26.1	26.8	26.8	26.8	28.6	28.6	28.6
Reforest	16) 163	166	169	169	169	183	197	197	197
T.S.I.	22) 629	629	618	640	673	686	686	686	686
Water	25) 367	367	368	369	371	375	375	375	375
Minerals	30) 2	2	2	2	2	3	3	3	4
H. & C.D.	20) 11.0	11.0	11.0	11.0	1.4	1.4	1.4	1.4	1.4
Protection	9) 261	243	243	243	189	198	189	180	180
Lands	33) 0	0	165	165	0	0	0	0	0
Soils	21) 67.2	67.2	71.4	92.4	63.0	69.3	71.4	71.4	71.4
Roads	25) 1.5	2.0	2.0	2.5	2.5	3.8	2.5	2.5	1.0
Total	1539.883	1526.767	1690.816	1739.737	1528.699	1601.590	1610.500	1600.153	1599.695
Projected FTE's	59.62*	59.11	65.46	67.35	59.18	62.01	62.35	61.95	61.93
TOTAL FOR COST									

25.83 Units/FTE

*—Same as 1981 Allocation

Appendix 10

MENDOCINO FOREST
COVELO DISTRICT PROJECTED TARGETS

OUTPUT	1982	1983	1984	1985	1986–1990	1991–2000	2001–2010	2011–2020	2021–2030
Recr. - Dev.	7) 0.014	0.015	0.017	0.018	0.018	0.020	0.018	0.024	0.026
Recr. - Disp.	21) 0.095	0.111	0.118	0.122	0.134	0.170	0.124	0.130	0.143
Trails	46) 9.2	9.2	8.7	7.8	8.3	8.7	7.4	7.4	7.4
Wild. & Fish Habitat	23) 5.00	5.26	5.26	5.26	4.67	3.99	3.11	2.02	2.01
Anad. Fish Imp.	50) 0	1.0	3.0	7.0	19.5	44.5	47.5	47.5	47.5
Range	48) 7.68	7.78	7.87	7.92	7.92	8.02	8.16	8.26	8.35
Tmbr. Sales Offered	20) 18.0	18.0	18.0	18.5	18.5	18.5	19.7	19.7	19.7
Reforest	19) 194	197	200	200	200	217	234	234	234
T.S.I.	9) 257	257	253	262	275	281	281	281	281
Water	25) 367	367	368	369	371	375	375	375	375
Minerals	23) 1	1	2	2	2	2	2	3	3
H. & C.D.	13) 7.2	7.2	7.2	7.2	0.9	0.9	0.9	0.9	0.9
Protection	11) 319	297	297	297	231	242	231	220	220
Lands	13) 0	0	65	65	0	0	0	0	0
Soils	30) 96	96	102	132	90	99	102	102	102
Roads	12) 0.7	1.0	1.0	1.2	1.2	1.8	1.2	1.2	0.5
Total	1281.889	1264.566	1338.165	1382.020	1230.142	1302.600	1313.112	1302.134	1301.529
Projected FTE's	38.99*	38.46	40.70	42.03	37.41	39.62	39.94	39.60	39.58
TOTAL FOR. COST									

32.88 Units/FTE

*—Same as 1981 Allocation

SHASTA-TRINITY FOREST
YOLLA BOLLA DISTRICT PROJECTED TARGETS

OUTPUT		1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
Recr. - Dev.	2)	0.026	0.028	0.029	0.030	0.031	0.033	0.035	0.041	0.045
Recr. - Disp.	13)	0.482	0.475	0.497	0.501	0.523	0.523	0.541	0.573	0.627
Trails	35)	16.80	17.15	16.80	14.35	15.05	16.10	13.30	13.65	14.00
Wild. & Fish Habitat	23)	2.502	2.631	2.631	2.631	2.337	1.996	1.555	1.012	1.003
Anad. Fish Imp.	0)	-	-	-	-	-	-	-	-	-
Range	12)	0.960	0.972	0.984	0.996	0.996	1.008	1.020	1.032	1.044
Tmbr. Sales Offered	11)	28.60	29.15	29.70	33.00	33.88	34.76	37.08	37.08	37.08
Reforest	4)	544	553	563	563	563	610	656	656	656
T.S.I.	11)	880	880	864	897	952	970	970	970	970
Water	22)	1887	1887	1892	1898	1908	1928	1928	1928	1928
Minerals	2)	3	3	3	3	3	3	4	4	4
H. & C.D.	1)	1.64	1.64	1.64	1.64	0.11	0.11	0.11	0.11	0.11
Protection	21)	840	798	819	819	714	735	693	588	609
Lands	4)	180	140	120	120	120	-	-	-	-
Soils	14)	75.6	75.6	75.6	92.4	72.8	79.8	81.2	82.6	82.6
Roads	13)	2.6	3.0	3.0	3.4	3.4	5.5	4.6	4.6	2.5
Total		4463.21	4391.646	4391.881	4448.948	4389.127	4385.83	4390.441	4286.698	4306.009
Projected FTE's		79.1*	77.8	77.8	78.8	77.8	77.7	77.8	76.0	76.3
% of Forest FTE										

56.425 Units/FTE

*—Same as 1981 Allocation

SHASTA-TRINITY FOREST
HAYFORK DISTRICT PROJECTED TARGETS

OUTPUT	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
Recr. - Dev.	3) 0.040	0.041	0.043	0.045	0.047	0.050	0.053	0.061	0.067
Recr. - Disp.	6) 0.223	0.219	0.229	0.231	0.241	0.241	0.250	0.264	0.289
Trails	3) 1.44	1.47	1.44	1.23	1.29	1.38	1.14	1.17	1.20
Wild. & Fish Habitat	12) 1.306	1.373	1.373	1.373	1.219	1.042	0.811	0.528	0.523
Anad. Fish Imp.	45) -	2.25	8.10	19.35	52.20	112.05	117.45	117.45	117.45
Range	13) 1.04	1.05	1.07	1.08	1.08	1.09	1.11	1.12	1.13
Tmbr. Sales Offered	19) 49.4	50.4	51.3	57.0	58.5	60.0	64.0	64.0	64.0
Reforest	26) 3536	3597	3657	3657	3657	3962	4267	4267	4267
T.S.I.	19) 1520	1520	1492	1549	1644	1677	1677	1677	1677
Water	1) 85.78	85.78	86.01	86.25	86.71	87.65	87.65	87.65	87.65
Minerals	2) 3	3	3	3	3	3	4	4	4
H. & C.D.	2) 3.28	3.28	3.28	3.28	0.22	0.22	0.22	0.22	0.22
Protection	26) 1040	988	1014	1014	884	910	858	728	754
Lands	5) 225	175	150	150	150	-	-	-	-
Soils	7) 37.8	37.8	39.2	46.2	36.4	39.9	40.6	41.3	41.3
Roads	23) 4.6	5.3	5.3	6.0	6.0	9.7	8.1	8.1	4.4
Total	6508.909	6471.963	6513.345	6595.039	6581.907	6865.323	7127.384	6997.863	7020.229
Projected FTE's	102.4*	101.8	102.5	103.8	103.6	108.0	112.1	110.1	110.5
% of Forest FTE									

63.56 Units/FTE

*—Same as 1981 Allocation

Appendix 10

SHASTA-TRINITY FOREST
BIG BAR DISTRICT PROJECTED TARGETS

OUTPUT	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
Recr. - Dev.	7) 0.092	0.097	0.101	0.105	0.109	0.116	0.123	0.142	0.157
Recr. - Disp.	14) 0.519	0.511	0.535	0.539	0.563	0.563	0.582	0.617	0.675
Trails	27) 12.96	13.23	12.96	11.07	11.61	12.42	10.26	10.53	10.80
Wild. & Fish Habitat	19) 2.07	2.17	2.17	2.17	1.93	1.65	1.28	0.84	0.83
Anad. Fish Imp.	55) -	2.75	9.90	23.65	63.80	136.95	143.55	143.55	143.55
Range	5) 0.40	0.41	0.41	0.42	0.42	0.42	0.43	0.43	0.44
Tmbr. Sales Offered	11) 28.6	29.2	29.7	33.0	33.9	34.8	37.1	37.1	37.1
Reforest	4) 544	553	563	563	563	610	656	656	656
T.S.I.	11) 880	880	864	897	951	970	970	970	970
Water	36) 3088	3088	3096	3105	3122	3155	3155	3155	3155
Minerals	22) 30	30	31	32	34	37	41	43	44
H. & C.D.	1) 1.6	1.6	1.6	1.6	0.1	0.1	0.1	0.1	0.1
Protection	9) 360	342	351	351	306	315	297	252	261
Lands	2) 765	595	510	510	510	-	-	-	-
Soils	14) 75.6	75.6	78.4	92.4	72.8	79.8	81.2	82.6	82.6
Roads	3) 0.60	0.69	0.69	0.78	0.78	1.26	1.05	1.05	0.57
Total	5789.441	5614.258	5551.466	5623.734	5672.012	5355.079	5394.675	5352.959	5362.822
Projected FTE's	72.4*	70.2	69.4	70.3	70.9	67.0	67.5	66.9	67.1
% of Forest FTE									

79.96 Units/FTE

*—Same as 1981 Allocation

SHASTA-TRINITY FOREST
WEAVERVILLE DISTRICT PROJECTED TARGETS

OUTPUT	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
Recr. - Dev.	25) 0.330	0.345	0.360	0.375	0.388	0.415	0.440	0.508	0.560
Recr. - Disp.	11) 0.408	0.402	0.420	0.424	0.442	0.442	0.458	0.485	0.530
Trails	24) 11.52	11.76	11.52	9.84	10.32	11.04	9.12	9.36	9.60
Wild. & Fish Habitat	6) 0.653	0.686	0.686	0.686	0.610	0.521	0.406	0.264	0.262
Anad. Fish Imp.	0) -	-	-	-	-	-	-	-	-
Range	1) 0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09
Tmbr. Sales Offered	13) 33.8	34.5	35.1	39.0	40.0	41.1	43.8	43.8	43.8
Reforest	2) 272	277	281	281	281	305	328	328	328
T.S.I.	13) 1040	1040	1021	1060	1125	1147	1147	1147	1147
Water	19) 1630	1630	1634	1639	1647	1665	1665	1665	1665
Minerals	15) 20	21	21	22	23	25	28	30	30
H. & C.D.	11) 18.0	18.0	18.0	18.0	1.2	1.2	1.2	1.2	1.2
Protection	31) 1240	1178	1209	1209	1054	1085	1023	868	899
Lands	19) 855	665	570	570	570	-	-	-	-
Soils	10) 54	54	56	66	52	57	58	59	59
Roads	12) 2.40	2.76	2.76	3.12	3.12	5.04	4.20	4.20	2.28
Total	5178.191	4933.533	4860.926	4918.525	4808.160	4343.838	4308.714	4157.177	4186.322
Projected FTE's	94.1*	89.7	88.3	89.4	87.4	78.9	78.3	75.5	76.1
% of Forest FTE									

55.03 Units/FTE

*—Same as 1981 Allocation

Appendix 10

SIX RIVERS FOREST
GASQUET DISTRICT PROJECTED TARGETS

OUTPUT		1982	1983	1984	1985	1986–1990	1991–2000	2001–2010	2011–2020	2021–2030
Recr. – Dev.	39)	0.066	0.070	0.074	0.078	0.078	0.086	0.082	0.105	0.117
Recr. – Disp.	46)	0.138	0.138	0.147	0.143	0.156	0.166	0.175	0.189	0.207
Trails	21)	2.7	2.7	2.7	2.3	2.5	2.7	2.1	2.1	2.3
Wild. & Fish Habitat	36)	2.94	3.09	3.09	3.09	2.74	2.34	1.83	1.19	1.18
Anad. Fish Imp.	25)	0	1.0	4.0	9.8	26.3	56.3	60.0	60.0	60.0
Range	0)	–	–	–	–	–	–	–	–	–
Timbr. Sales Offered	17)	27.2	28.9	30.1	33.9	38.9	43.5	46.4	46.4	46.4
Reforest	16)	639	650	661	661	661	709	772	772	772
T.S.I.	24)	823	823	811	835	895	912	912	912	912
Water	31)	1520	1520	1524	1528	1536	1552	1552	1552	1552
Minerals	9)	5	5	5	5	5	6	6	7	7
H. & C.D.	26)	13.0	13.0	13.0	13.0	1.8	1.8	1.8	1.8	1.8
Protection	4)	924	882	903	882	735	756	714	651	651
Lands	25)	–	–	–	–	–	–	–	–	–
Soils	36)	147.6	147.6	154.8	190.8	140.4	154.8	154.8	158.4	158.4
Roads	24)	4.3	5.0	5.0	5.8	6.0	10.1	7.4	7.4	4.6
Total		4108.944	4081.498	4116.911	4169.911	4050.874	4372.626	4230.587	4171.584	4169.004
Projected FTE's		66.4*	66.0	66.5	67.4	65.5	70.7	68.4	67.4	67.4
TOTAL FOR COST										

61.88 Units/FTE

*—Same as 1981 Allocation

SIX RIVERS FOREST
ORLEANS DISTRICT PROJECTED TARGETS

OUTPUT	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
Recr. - Dev.	26) 0.044	0.047	0.049	0.052	0.052	0.057	0.055	0.070	0.078
Recr. - Disp.	32) 0.096	0.096	0.102	0.099	0.109	0.115	0.122	0.131	0.144
Trails	18) 2.3	2.3	2.3	2.0	2.2	2.3	1.8	1.8	2.0
Wild. & Fish Habitat	21) 1.71	1.80	1.80	1.80	1.60	1.37	1.06	0.69	0.69
Anad. Fish Imp.	26) 0	1.04	4.16	10.14	27.30	58.50	62.40	62.40	62.40
Range	0) -	-	-	-	-	-	-	-	-
Tmbr. Sales Offered	29) 46.4	49.3	51.3	57.9	66.4	74.2	79.2	79.2	79.2
Reforest	38) 1518	1545	1571	1571	1571	1683	1833	1833	1833
T.S.I.	40) 1371	1371	1351	1391	1491	1520	1520	1520	1520
Water	23) 1127	1127	1130	1133	1140	1152	1152	1152	1152
Minerals	6) 3	3	3	3	4	4	4	5	5
H. & C.D.	23) 11.5	11.5	11.5	11.5	1.6	1.6	1.6	1.6	1.6
Protection	25) 1100	1050	1075	1050	875	900	850	775	775
Lands	5) -	-	-	-	-	-	-	-	-
Soils	21) 86.1	86.1	90.3	111.3	81.9	90.3	90.3	92.4	92.4
Roads	24) 4.3	5.0	5.0	5.8	6.0	10.1	7.4	7.4	4.6
Total	5271.450	5253.183	5296.511	5348.591	5268.161	5497.542	5602.937	5530.691	5528.112
Projected FTE's	59.0*	58.8	59.3	59.9	59.0	61.5	62.7	61.9	61.9
TOTAL FOR COST									

89.35 Units/FTE

*—Same as 1981 Allocation

Appendix 10

SIX RIVERS FOREST
LOWER TRINITY DISTRICT PROJECTED TARGETS

OUTPUT	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
Recr. - Dev.	30) 0.051	0.054	0.057	0.060	0.060	0.066	0.063	0.081	0.090
Recr. - Disp.	16) 0.048	0.048	0.051	0.050	0.054	0.058	0.061	0.066	0.072
Trails	7) 0.9	0.9	0.9	0.8	0.8	0.9	0.7	0.7	0.8
Wild. & Fish Habitat	19) 1.55	1.63	1.63	1.63	1.45	1.24	0.96	0.63	0.62
Anad. Fish Imp.	28) 0	1.12	4.48	10.92	29.40	63.00	67.20	67.20	67.20
Range	16) 1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7
Tmbr. Sales Offered	31) 49.6	52.7	54.9	61.8	71.0	79.4	84.7	84.7	84.7
Reforest	24) 959	976	994	994	994	1063	1158	1158	1158
T.S.I.	16) 548	548	540	556	596	608	608	608	608
Water	17) 833	833	836	838	842	851	851	851	851
Minerals	38) 20	20	21	21	23	24	27	29	29
H. & C.D.	31) 15.5	15.5	15.5	15.5	2.2	2.2	2.2	2.2	2.2
Protection	32) 1408	1344	1376	1344	1120	1152	1088	992	992
Lands	33) -	-	-	-	-	-	-	-	-
Soils	19) 77.9	77.9	81.7	100.7	74.1	81.7	81.7	83.6	83.6
Roads	20) 3.6	4.2	4.2	4.8	5.0	8.4	6.2	6.2	3.8
Total	3918.749	3876.652	3932.018	3950.860	3760.664	3936.664	3977.484	3885.077	3882.782
FTE's	70.6*	69.8	70.8	71.2	67.7	70.9	71.7	70.0	69.9
TOTAL FOR COST									

55.51 Units/FTE

*—Same as 1981 Allocation

Appendix 10

SIX RIVERS FOREST
MAD RIVER DISTRICT PROJECTED TARGETS

OUTPUT	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
Recr. - Dev.	5) 0.009	0.009	0.010	0.010	0.010	0.011	0.011	0.014	0.015
Recr. - Disp.	6) 0.018	0.018	0.019	0.019	0.020	0.022	0.023	0.025	0.027
Trails	54) 7.0	7.0	7.0	5.9	6.5	7.0	5.4	5.4	5.9
Wild. & Fish Habitat	24) 1.96	2.06	2.06	2.06	1.83	1.56	1.22	0.79	0.78
Anad. Fish Imp.	21) 0	0.8	3.4	8.2	22.1	47.3	50.4	50.4	50.4
Range	84) 8.4	8.5	8.6	8.7	8.7	8.8	8.9	9.0	9.2
Tmbr. Sales Offered	23) 36.8	39.1	40.7	45.9	52.7	58.9	62.8	62.8	62.8
Reforest	22) 879	894	909	909	909	974	1061	1061	1061
T.S.I.	20) 686	686	676	696	746	760	760	760	760
Water	29) 1422	1422	1425	1429	1437	1452	1452	1452	1452
Minerals	47) 24	24	25	26	28	30	33	35	36
H. & C.D.	3) 1.5	1.5	1.5	1.5	0.2	0.2	0.2	0.2	0.2
Protection	22) 968	924	946	924	770	792	748	682	682
Lands	37) -	-	-	-	-	-	-	-	-
Soils	24) 98.4	98.4	103.2	127.2	93.6	103.2	103.2	105.6	105.6
Roads	32) 5.8	6.7	6.7	7.7	8.0	13.4	9.9	9.9	6.1
Total	4138.887	4114.087	4154.189	4191.189	4083.66	4248.393	4296.054	4234.129	4232.022
Projected FTE's	58.1*	57.8	58.3	58.8	57.3	59.6	60.3	59.4	59.4
TOTAL FOR COST									

71.24 Units/FTE

*—Same as 1981 Allocation

Appendix 11

KLAMATH FOREST
ALL DISTRICT PROJECTED TARGETS

PROJECTED FTE's WEIGHTED BY TYPE OF WORK.

OUTPUT	1982	1983	1984	1985	1986–1990	1991–2000	2001–2010	2011–2020	2021–2030
Recr. - Dev.	13.25 (120.4545)	13.25	15.66	16.86	16.86	18.07	18.07	21.68	24.09
Recr. - Disp.	5.53 (9.87500)	5.73	5.93	6.02	6.32	6.72	6.22	7.60	7.90
Trails	0.13 (0.003023)	0.13	0.13	0.11	0.12	0.12	0.10	0.11	0.11
Wild. & Fish Habitat	7.65 (0.281250)	8.04	8.04	8.04	7.14	6.10	4.75	3.09	3.07
Anad. Fish Imp.	0.06 (0.008571)	0.06	0.20	0.49	1.31	2.83	2.99	2.99	2.99
Range	5.53 (0.167576)	5.58	5.65	5.70	5.70	5.78	5.87	5.93	6.00
Tmbr. Sales Offered	450.50 (1.7000)	459.00	467.50	479.23	479.23	479.23	511.19	511.19	511.19
Reforest	26.99 (0.0026285)	27.45	27.92	27.92	27.92	30.24	32.57	32.57	32.57
T.S.I.	5.53 (0.001317)	5.53	5.33	5.73	6.39	6.51	6.51	6.51	6.51
Water	4.42 (0.0011998)	4.42	4.43	4.44	4.47	4.52	4.52	4.52	4.52
Minerals	2.86 (0.046885)	2.86	2.91	3.09	3.28	3.47	3.89	4.13	4.22
H. & C.D.	1.12 (0.017500)	1.12	1.12	1.12	0.16	0.16	0.16	0.16	0.16
Protection	82.71 (0.017598)	79.19	80.95	80.95	63.35	65.11	63.35	58.07	58.07
Lands	6.72 (0.004480)	6.72	2.24	4.48	4.48	0	0	0	0
Soils	2.74 (0.006683)	2.74	2.87	3.54	2.61	2.87	2.87	2.94	2.94
Roads	6.16 (0.34222)	7.19	7.19	7.87	8.21	14.37	10.61	10.61	6.50
Total	621.9	629.01	638.07	655.59	637.55	646.10	673.67	672.10	670.84
% Change	0	+1.14	+2.60	+5.42	+2.52	+3.89	+8.32	+8.07	+7.87
Total For. Cost									

KLAMATH FOREST
OAK KNOLL DISTRICT PROJECTED TARGETS

PROJECTED FTE's WEIGHTED BY TYPE OF WORK.

OUTPUT	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
Recr. - Dev.	1.97 (98.500)	1.97	2.27	2.46	2.46	2.66	2.66	3.15	3.55
Recr. - Disp.	0.82 (7.73585)	0.85	0.88	0.90	0.94	1.00	0.93	1.13	1.18
Trails	0.02 (0.004255)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Wild. & Fish Habitat	1.14 (0.29921)	1.20	1.20	1.20	1.07	0.91	0.71	0.46	0.46
Anad. Fish Imp.	0.01 (0.007143)	0.01	0.03	0.08	0.22	0.47	0.50	0.50	0.50
Range	0.82 (0.112329)	0.82	0.83	0.84	0.84	0.85	0.86	0.88	0.89
Tmbr. Sales Offered	67.15 (1.58373)	68.73	69.68	71.43	71.43	71.43	76.18	76.18	76.18
Reforest	4.02 (0.003914)	4.09	4.17	4.17	4.16	4.51	4.85	4.85	4.85
T.S.I.	0.83 (0.001235)	0.83	0.80	0.86	0.96	0.98	0.98	0.98	0.98
Water	0.66 (0.001279)	0.66	0.66	0.66	0.67	0.67	0.67	0.67	0.67
Minerals	0.43 (0.033077)	0.43	0.43	0.46	0.50	0.53	0.56	0.60	0.63
H. & C.D.	0.17 (0.018889)	0.17	0.17	0.17	0.02	0.02	0.02	0.02	0.02
Protection	12.33 (0.023849)	11.80	12.07	12.07	9.44	9.71	9.44	8.66	8.66
Lands	1.00 (0.001709)	1.00	0.33	0.67	0.67	0	0	0	0
Soils	0.41 (0.00554)	0.41	0.43	0.53	0.39	0.43	0.43	0.44	0.44
Roads	0.92 (0.187755)	1.07	1.07	1.16	1.22	2.12	1.58	1.58	0.96
Total	92.7	94.6	95.19	97.68	95.01	96.31	100.39	100.12	99.99
% Change	0	+2.05	+2.69	+5.37	+2.49	+3.89	+8.30	+8.00	+7.86
Total For. Cost									

KLAMATH FOREST
HAPPY CAMP DISTRICT PROJECTED TARGETS

PROJECTED FTE's WEIGHTED BY TYPE OF WORK.

OUTPUT	1982	1983	1984	1985	1986–1990	1991–2000	2001–2010	2011–2020	2021–2030
Recr. - Dev.	1.95 (92.85714)	1.95	2.32	2.51	2.51	2.69	2.69	3.16	3.53
Recr. - Disp.	0.81 (23.82353)	0.83	0.86	0.88	0.91	0.98	0.91	1.10	1.14
Trails	0.02 (0.00333)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Wild. & Fish Habitat	1.12 (0.21663)	1.18	1.18	1.18	1.05	0.89	0.70	0.45	0.45
Anad. Fish Imp.	0.01 (0.007143)	0.01	0.03	0.08	0.22	0.47	0.50	0.50	0.50
Range	0.81 (2.7000)	0.81	0.81	0.81	0.81	1.08	1.08	1.08	1.08
Tmbr. Sales Offered	66.22 (0.861118)	67.42	68.72	70.44	70.44	70.44	75.09	75.09	75.09
Reforest	3.97 (0.003516)	4.04	4.11	4.11	4.11	4.45	4.79	4.79	4.79
T.S.I.	0.81 (0.000665)	0.81	0.78	0.84	0.94	0.95	0.95	0.95	0.95
Water	0.65 (0.0009286)	0.65	0.65	0.65	0.66	0.66	0.66	0.66	0.66
Minerals	0.42 (0.032308)	0.42	0.42	0.45	0.48	0.52	0.55	0.58	0.61
H. & C.D.	0.16 (0.017778)	0.16	0.16	0.16	0.02	0.02	0.02	0.02	0.02
Protection	12.16 (0.008624)	11.64	11.90	11.90	9.31	9.57	9.31	8.54	8.54
Lands	0.99 (0.008250)	0.99	0.33	0.66	0.66	0	0	0	0
Soils	0.40 (0.012121)	0.40	0.41	0.51	0.38	0.41	0.41	0.42	0.42
Roads	0.90 (0.281250)	1.07	1.07	1.15	1.21	2.14	1.58	1.58	0.96
Total	91.4	92.4	93.77	96.35	93.73	95.29	99.26	98.94	98.76
% Change	0	+1.09	+2.59	+5.42	+2.55	+4.26	+8.60	+8.25	+8.05
Total For. Cost									

KLAMATH FOREST
SALMON RIVER DISTRICT PROJECTED TARGETS

PROJECTED FTE's WEIGHTED BY TYPE OF WORK.

OUTPUT	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
Recr. - Dev.	1.37 (137.00)	1.37	1.64	1.78	1.78	1.92	1.92	2.19	2.47
Recr. - Disp.	0.58 (9.35484)	0.60	0.61	0.63	0.65	0.70	0.65	0.80	0.82
Trails	0.01 (0.000529)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Wild. & Fish Habitat	0.80 (0.12251)	0.84	0.84	0.84	0.75	0.64	0.50	0.32	0.32
Anad. Fish Imp.	0.01 (0.0050)	0.01	0.03	0.08	0.22	0.48	0.51	0.51	0.51
Range	0.58 (0.25217)	0.58	0.61	0.61	0.61	0.61	0.63	0.63	0.63
Tmbr. Sales Offered	46.86 (0.92976)	47.70	48.63	49.84	49.84	49.84	53.09	53.09	53.09
Reforest	2.81 (0.000829)	2.86	2.91	2.91	2.91	3.15	3.39	3.39	3.39
T.S.I.	0.58 (0.0007268)	0.58	0.56	0.60	0.67	0.68	0.68	0.68	0.68
Water	0.46 (0.00052)	0.46	0.46	0.46	0.46	0.47	0.47	0.47	0.47
Minerals	0.30 (0.01875)	0.30	0.32	0.34	0.36	0.38	0.41	0.45	0.45
H. & C.D.	0.12 (0.013333)	0.12	0.12	0.12	0.02	0.02	0.02	0.02	0.02
Protection	8.60 (0.0059025)	8.23	8.42	8.42	6.59	6.77	6.59	6.04	6.04
Lands	0.70 (0.005185)	0.70	0.23	0.47	0.47	0	0	0	0
Soils	0.28 (0.006829)	0.28	0.29	0.36	0.27	0.29	0.29	0.30	0.30
Roads	0.64 (0.3200)	0.74	0.74	0.80	0.83	1.47	1.09	1.09	0.67
Total	64.7	65.38	66.42	68.27	66.44	67.43	70.25	69.99	69.87
% Change	0	+1.05	+2.66	+5.52	+2.70	+4.22	+8.58	+8.18	+7.99
Total For. Cost									

KLAMATH FOREST
SCOTT RIVER DISTRICT PROJECTED TARGETS

PROJECTED FTE's WEIGHTED BY TYPE OF WORK.

OUTPUT	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
Recr. - Dev.	1.72 (95.55556)	1.72	2.01	2.10	2.10	2.29	2.29	2.77	3.06
Recr. - Disp.	0.72 (4.44444)	0.75	0.77	0.79	0.83	0.88	0.81	0.99	1.03
Trails	0.02 (0.002105)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Wild. & Fish Habitat	0.99 (0.363971)	1.04	1.04	1.04	0.92	0.79	0.62	0.40	0.40
Anad. Fish Imp.	0.01 (0.014286)	0.01	0.03	0.08	0.22	0.47	0.50	0.50	0.50
Range	0.72 (0.109091)	0.73	0.73	0.74	0.74	0.75	0.76	0.77	0.79
Tmbr. Sales Offered	58.53 (2.76085)	59.63	60.74	62.40	62.40	62.40	66.54	66.54	66.54
Reforest	3.51 (0.017122)	3.58	3.63	3.63	3.63	3.94	4.25	4.25	4.25
T.S.I.	0.72 (0.002143)	0.72	0.69	0.75	0.83	0.85	0.85	0.85	0.85
Water	0.57 (0.001549)	0.57	0.57	0.57	0.58	0.58	0.58	0.58	0.58
Minerals	0.37 (0.030833)	0.37	0.37	0.40	0.40	0.43	0.49	0.52	0.52
H. & C.D.	0.14 (0.0155556)	0.14	0.14	0.14	0.02	0.02	0.02	0.02	0.02
Protection	10.75 (0.045745)	10.29	10.52	10.52	8.23	8.46	8.23	7.55	7.55
Lands	0.87 (0.002417)	0.87	0.29	0.58	0.58	0	0	0	0
Soils	0.36 (0.003025)	0.36	0.38	0.47	0.34	0.38	0.38	0.39	0.39
Roads	0.80 (0.347826)	0.94	0.94	1.04	1.08	1.91	1.39	1.39	0.87
Total	80.8	81.74	82.87	85.25	82.92	84.17	87.73	87.54	87.37
% Change	0	+1.16	+2.56	+5.51	+2.62	+4.17	+8.58	+8.34	+8.13
Total For. Cost									

KLAMATH FOREST
UKONOM DISTRICT PROJECTED TARGETS

PROJECTED FTE's WEIGHTED BY TYPE OF WORK.

OUTPUT	1982	1983	1984	1985	1986–1990	1991–2000	2001–2010	2011–2020	2021–2030
Recr. - Dev.	1.37 (54.800)	1.37	1.64	1.75	1.75	1.92	1.92	2.25	2.52
Recr. - Disp.	0.57 (3.27586)	0.59	0.61	0.62	0.65	0.69	0.64	0.78	0.81
Trails	0.01 (0.002256)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Wild. & Fish Habitat	0.79 (0.207349)	0.83	0.83	0.83	0.74	0.63	0.49	0.32	0.32
Anad. Fish Imp.	0.01 (0.006667)	0.01	0.03	0.08	0.22	0.46	0.49	0.49	0.49
Range	0.57 (0.812486)	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Tmbr. Sales Offered	46.43 (1.752075)	47.31	48.18	49.41	49.41	49.14	52.74	52.74	52.74
Reforest	2.78 (0.0010864)	2.50	2.54	2.54	2.54	2.75	2.96	2.96	2.96
T.S.I.	0.57 (0.001357)	0.57	0.55	0.59	0.66	0.67	0.67	0.67	0.67
Water	0.46 (0.0008915)	0.46	0.46	0.46	0.46	0.47	0.47	0.47	0.47
Minerals	0.29 (0.07250)	0.29	0.29	0.29	0.29	0.29	0.36	0.36	0.36
H. & C.D.	0.12 (0.0133333)	0.12	0.12	0.12	0.01	0.01	0.01	0.01	0.01
Protection	8.53 (0.025927)	8.17	8.35	8.35	6.53	6.72	6.53	5.99	5.99
Lands	0.69 (0.01150)	0.69	0.23	0.46	0.46	0	0	0	0
Soils	0.28 (0.00359)	0.28	0.29	0.36	0.27	0.29	0.29	0.30	0.30
Roads	0.63 (0.4500)	0.77	0.77	0.81	0.86	1.53	1.13	1.13	0.68
Total	64.1	64.54	65.47	67.25	65.43	67.95	69.28	69.05	68.90
% Change	0	+0.69	+2.14	+4.98	+2.07	+6.01	+8.08	+7.72	+7.49
Total For. Cost									

MENDOCINO FOREST
ALL DISTRICT PROJECTED TARGETS

PROJECTED FTE's WEIGHTED BY TYPE OF WORK.

OUTPUT	1982	1983	1984	1985	1986–1990	1991–2000	2001–2010	2011–2020	2021–2030
Recr. - Dev.	11.89 (59.4500)	13.08	14.27	14.86	15.46	16.65	14.86	20.21	22.00
Recr. - Disp.	1.31 (2.911111)	1.54	1.63	1.69	1.86	2.36	1.72	1.80	1.98
Trails	0.13 (0.00650)	0.13	0.12	0.11	0.12	0.12	0.10	0.10	0.10
Wild. & Fish Habitat	3.31 (0.152114)	3.48	3.48	3.48	3.09	2.64	2.06	1.34	1.33
Anad. Fish Imp.	0.03 (0.01500)	0.03	0.09	0.21	0.59	1.34	1.43	1.43	1.43
Range	1.18 (0.07375)	1.19	1.21	1.22	1.22	1.23	1.25	1.27	1.28
Tmbr. Sales Offered	181.72 (2.019111)	181.72	181.72	186.57	186.57	186.57	199.08	199.08	199.08
Reforest	13.66 (0.013392)	13.89	14.12	14.12	14.12	15.32	16.50	16.50	16.50
T.S.I.	1.31 (0.0004585)	1.31	1.29	1.33	1.40	1.43	1.43	1.43	1.43
Water	1.77 (0.0012057)	1.77	1.77	1.78	1.79	1.81	1.81	1.81	1.81
Minerals	0.30 (0.0600)	0.36	0.48	0.48	0.48	0.54	0.60	0.66	0.72
H. & C.D.	0.03 (0.0005455)	0.03	0.03	0.03	0	0	0	0	0
Protection	101.00 (0.034828)	94.04	94.04	94.04	73.14	76.62	73.14	69.66	69.66
Lands	2.72 (0.00544)	0	2.72	2.72	0	0	0	0	0
Soils	1.44 (0.00450)	1.44	1.53	1.98	1.35	1.49	1.53	1.53	1.53
Roads	5.80 (0.966667)	7.73	7.73	9.67	9.67	14.50	9.67	9.67	3.87
Total	327.6	321.74	326.23	334.29	310.86	322.62	325.18	326.49	322.72
% Change	0	-1.79	-0.62	+2.04	-5.11	-1.52	-0.74	-0.34	-1.49
Total For. Cost									

MENDOCINO FOREST
CORNING DISTRICT PROJECTED TARGETS

PROJECTED FTE's WEIGHTED BY TYPE OF WORK.

OUTPUT	1982	1983	1984	1985	1986–1990	1991–2000	2001–2010	2011–2020	2021–2030
Recr. - Dev.	1.55 (129.1667)	1.66	1.81	1.94	2.07	2.20	1.94	2.58	2.84
Recr. - Disp.	0.17 (1.71717)	0.20	0.21	0.22	0.24	0.31	0.22	0.23	0.26
Trails	0.02 (0.011111)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Wild. & Fish Habitat	0.43 (0.104116)	0.45	0.45	0.45	0.40	0.34	0.27	0.17	0.17
Anad. Fish Imp.	0.004	0	0	0	0	0	0	0	0
Range	0.15 (0.078125)	0.15	0.15	0.15	0.15	0.16	0.16	0.16	0.16
Tmbr. Sales Offered	23.62 (0.87481)	23.62	23.62	24.23	24.23	24.23	25.89	25.89	25.89
Reforest	1.78 (0.003716)	1.81	1.84	1.84	1.84	2.00	2.15	2.15	2.15
T.S.I.	0.17 (0.000106)	0.17	0.17	0.17	0.18	0.19	0.19	0.29	0.29
Water	0.23 (0.000627)	0.23	0.23	0.23	0.23	0.24	0.24	0.24	0.24
Minerals	0.04 (0.0400)	0.04	0.08	0.08	0.08	0.08	0.08	0.08	0.08
H. & C.D.	0.004 (0.00022)	0	0	0	0	0	0	0	0
Protection	13.13 (0.014605)	12.22	12.22	12.22	9.51	9.96	9.51	9.06	9.06
Lands	0.35 (0.002059)	0	0.35	0.35	0	0	0	0	0
Soils	0.19 (0.002969)	0.19	0.20	0.26	0.18	0.20	0.20	0.20	0.20
Roads	0.75 (0.378788)	1.00	1.00	1.25	1.25	1.88	1.25	1.25	0.50
Total	42.59	41.76	42.35	43.41	40.38	41.81	42.12	42.32	41.86
% Change	0	-1.95	-0.56	+1.93	-5.19	-1.83	-1.10	-0.63	-1.71
Total For. Cost									

KLAMATH FOREST
STONYFORD DISTRICT PROJECTED TARGETS

PROJECTED FTE's WEIGHTED BY TYPE OF WORK.

OUTPUT	1982	1983	1984	1985	1986–1990	1991–2000	2001–2010	2011–2020	2021–2030
Recr. - Dev.	2.56 (33.6842)	2.83	3.07	3.20	3.33	3.57	3.20	4.35	4.75
Recr. - Disp.	0.28 (2.29508)	0.33	0.35	0.36	0.40	0.50	0.36	0.38	0.42
Trails	0.03 (0.005357)	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Wild. & Fish Habitat	0.71 (0.11639)	0.75	0.75	0.75	0.66	0.57	0.44	0.29	0.28
Anad. Fish Imp.	0.01 0	0	0	0	0	0	0	0	0
Range	0.25 (0.055804)	0.25	0.26	0.26	0.26	0.26	0.27	0.27	0.27
Tmbr. Sales Offered	39.07 (2.067196)	39.07	39.07	40.10	40.10	40.10	42.79	42.79	42.79
Reforest	2.94 (0.016955)	2.99	3.04	3.04	3.04	3.30	3.55	3.55	3.55
T.S.I.	0.28 (0.0007539)	0.28	0.28	0.28	0.28	0.31	0.31	0.31	0.31
Water	0.38 (0.0010354)	0.38	0.38	0.38	0.38	0.39	0.39	0.39	0.39
Minerals	0.06 (0.0600)	0.12	0.12	0.12	0.12	0.18	0.18	0.18	0.18
H. & C.D.	0.01 (0.000535)	0.01	0.01	0.01	0	0	0	0	0
Protection	21.71 (0.015278)	20.21	20.21	20.21	15.72	16.47	15.72	14.97	14.97
Lands	0.58 (0.00580)	0	0.58	0.58	0	0	0	0	0
Soils	0.31 (0.003341)	0.31	0.33	0.43	0.29	0.32	0.33	0.33	0.33
Roads	1.25 (0.69444)	1.67	1.67	2.08	2.08	3.12	2.08	2.08	0.83
Total	70.43	69.23	70.15	71.83	66.69	69.12	69.64	69.91	69.09
% Change	0	-1.70	-0.40	+1.99	-5.30	-1.86	-1.12	-0.74	-1.90
Total For. Cost									

MENDOCINO FOREST
UPPER LAKE DISTRICT PROJECTED TARGETS

PROJECTED FTE's WEIGHTED BY TYPE OF WORK.

OUTPUT	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
Recr. - Dev.	2.16 (22.0408)	2.38	2.60	2.71	2.80	3.02	2.71	3.68	3.99
Recr. - Disp.	0.24 (1.77778)	0.28	0.30	0.31	0.34	0.43	0.31	0.33	0.36
Trails	0.02 (0.005882)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Wild. & Fish Habitat	0.60 (0.09188)	0.63	0.63	0.63	0.56	0.48	0.37	0.24	0.24
Anad. Fish Imp.	0.01 (0.0100)	0.01	0.03	0.07	0.20	0.45	0.48	0.48	0.48
Range	0.21 (0.109375)	0.21	0.22	0.22	0.22	0.22	0.22	0.23	0.23
Tmbr. Sales Offered	33.08 (1.267433)	33.08	33.08	33.97	33.97	33.97	36.25	36.25	36.25
Reforest	2.49 (0.015276)	2.54	2.58	2.58	2.58	2.80	3.01	3.01	3.01
T.S.I.	0.24 (0.0003816)	0.24	0.24	0.24	0.26	0.26	0.26	0.26	0.26
Water	0.32 (0.0008719)	0.32	0.32	0.32	0.32	0.33	0.33	0.33	0.33
Minerals	0.05 (0.0250)	0.05	0.05	0.05	0.05	0.08	0.08	0.08	0.10
H. & C.D.	0.01 (0.000909)	0.01	0.01	0.01	0	0	0	0	0
Protection	18.38 (0.0704215)	17.11	17.11	17.11	13.31	13.94	13.31	12.68	12.68
Lands	0.49 (0.00297)	0	0.49	0.49	0	0	0	0	0
Soils	0.26 (0.003869)	0.26	0.28	0.36	0.24	0.27	0.28	0.28	0.28
Roads	1.06 (0.706667)	1.41	1.41	1.77	1.77	2.69	1.77	1.77	0.71
Total	59.62	58.55	59.37	60.86	56.64	58.96	59.40	59.64	58.94
% Change	0	-1.80	-0.42	+2.08	-5.00	-1.10	-0.37	+0.03	-1.14
Total For. Cost									

MENDOCINO FOREST
COVELO DISTRICT PROJECTED TARGETS

PROJECTED FTE's WEIGHTED BY TYPE OF WORK.

OUTPUT	1982	1983	1984	1985	1986–1990	1991–2000	2001–2010	2011–2020	2021–2030
Recr. - Dev.	1.42 (101.4286)	1.52	1.72	1.83	1.83	2.03	1.83	2.43	2.64
Recr. - Disp.	0.16 (1.68421)	0.19	0.20	0.21	0.23	0.29	0.21	0.22	0.24
Trails	0.02 (0.002174)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Wild. & Fish Habitat	0.39 (0.07800)	0.41	0.41	0.41	0.36	0.31	0.24	0.16	0.16
Anad. Fish Imp.	0.004 (0.00400)	0	0.01	0.03	0.08	0.18	0.19	0.19	0.19
Range	0.14 (0.018229)	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.15
Tmbr. Sales Offered	21.62 (1.201111)	21.62	21.62	22.22	22.22	22.22	23.66	23.66	23.66
Reforest	1.63 (0.008402)	1.66	1.68	1.68	1.68	1.82	1.97	1.97	1.97
T.S.I.	0.16 (0.000623)	0.16	0.16	0.16	0.17	0.18	0.18	0.18	0.18
Water	0.21 (0.0005722)	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Minerals	0.03 (0.0300)	0.03	0.06	0.06	0.06	0.06	0.06	0.09	0.09
H. & C.D.	0.004 (0.000556)	0	0	0	0	0	0	0	0
Protection	12.02 (0.03768)	11.19	11.19	11.19	8.70	9.12	8.70	8.29	8.29
Lands	0.32 (0.004923)	0	0.32	0.32	0	0	0	0	0
Soils	0.17 (0.0017708)	0.17	0.18	0.23	0.16	0.18	0.18	0.18	0.18
Roads	0.69 (0.98571)	0.99	0.99	1.18	1.18	1.77	1.18	1.18	0.49
Total	38.99	38.31	38.91	39.89	37.04	38.54	38.78	38.93	38.47
% Change	0	-1.74	-0.21	+2.31	-5.00	-1.15	-0.54	-0.15	-1.33
Total For. Cost									

SHASTA-TRINITY FOREST
ALL DISTRICT PROJECTED TARGETS

PROJECTED FTE's WEIGHTED BY TYPE OF WORK.

OUTPUT	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
Recr. - Dev.	72.25 (54.73485)	75.53	78.82	82.10	84.84	90.86	96.33	111.11	122.61
Recr. - Disp.	1.33 (0.35849)	1.31	1.37	1.38	1.44	1.44	1.49	1.58	1.73
Trails	0.67 (0.013958)	0.68	0.67	0.57	0.60	0.64	0.53	0.54	0.56
Wild. & Fish Habitat	3.91 (0.359375)	4.11	4.11	4.11	3.65	3.12	2.43	1.58	1.57
Anad. Fish Imp.	0.08 (0.01600)	0.08	0.29	0.69	1.87	3.98	4.18	4.18	4.18
Range	3.58 (0.44750)	3.62	3.67	3.71	3.71	3.76	3.80	3.85	3.89
Tmbr. Sales Offered	454.58 (1.74838)	463.32	472.06	524.51	538.50	552.49	589.38	589.38	589.38
Reforest	13.74 (0.0010104)	13.98	14.21	14.21	14.21	15.40	16.58	16.58	16.58
T.S.I.	0.58 (0.0000725)	0.58	0.57	0.59	0.63	0.64	0.64	0.64	0.64
Water	18.31 (0.0021345)	18.31	18.36	18.41	18.51	18.71	18.71	18.71	18.71
Minerals	1.58 (0.0117037)	1.60	1.66	1.72	1.83	1.94	2.17	2.31	2.35
H. & C.D.	14.24 (0.086829)	14.24	14.24	14.24	0.96	0.96	0.96	0.96	0.96
Protection	198.53 (0.049633)	188.61	193.57	193.57	168.75	173.72	163.79	138.97	143.94
Lands	13.65 (0.003033)	10.62	9.10	9.10	9.10	0	0	0	0
Soils	2.41 (0.004463)	2.41	2.50	2.95	2.32	2.54	2.59	2.63	2.63
Roads	32.96 (1.64800)	37.90	37.90	42.85	42.85	69.22	57.68	57.68	31.31
Total	832.4	836.90	853.1	914.71	893.77	939.42	970.26	950.70	941.04
% Change	0	+0.54	+2.49	+9.89	+7.37	+12.86	+16.56	+14.21	+13.05
Total For. Cost									

SHASTA-TRINITY FOREST
YOLLA BOLLA DISTRICT PROJECTED TARGETS

PROJECTED FTE's WEIGHTED BY TYPE OF WORK.

OUTPUT	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
Recr. - Dev.	6.87 (264.2308)	7.40	7.66	7.93	8.19	8.72	9.25	10.83	11.89
Recr. - Disp.	0.13 (0.2697095)	0.13	0.13	0.14	0.14	0.14	0.15	0.15	0.17
Trails	0.06 (0.003571)	0.06	0.06	0.06	0.05	0.06	0.05	0.05	0.05
Wild. & Fish Habitat	0.37 (0.1478817)	0.39	0.39	0.39	0.35	0.30	0.23	0.15	0.15
Anad. Fish Imp.	0.01 0	0	0	0	0	0	0	0	0
Range	0.34 (0.354167)	0.34	0.35	0.35	0.35	0.36	0.36	0.37	0.37
Tmbr. Sales Offered	43.19 (1.5101399)	44.02	44.85	49.83	51.16	52.49	56.00	56.00	56.00
Reforest	1.31 (0.002408)	1.33	1.36	1.36	1.36	1.47	1.58	1.58	1.58
T.S.I.	0.06 (0.0000682)	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07
Water	1.74 (0.000922)	1.74	1.74	1.75	1.76	1.78	1.78	1.78	1.78
Minerals	0.15 (0.0500)	0.15	0.15	0.15	0.15	0.15	0.20	0.20	0.20
H. & C.D.	1.35 (0.82317)	1.35	1.35	1.34	0.09	0.09	0.09	0.09	0.09
Protection	18.86 (0.022452)	17.92	18.39	18.39	16.03	16.50	15.56	13.20	13.67
Lands	1.30 (0.007222)	1.01	0.87	0.87	0.87	0	0	0	0
Soils	0.23 (0.0030423)	0.23	0.23	0.28	0.22	0.24	0.25	0.25	0.25
Roads	3.13 (1.203846)	3.61	3.61	4.09	4.09	6.62	5.54	5.54	3.01
Total	79.1	79.74	81.20	86.99	84.87	88.99	91.11	90.26	89.28
% Change	0	+0.81	+2.65	+9.97	+7.29	+12.50	+15.18	+14.11	+12.87
Total For. Cost									

SHASTA-TRINITY FOREST
BIG BAR DISTRICT PROJECTED TARGETS

PROJECTED FTE's WEIGHTED BY TYPE OF WORK.

OUTPUT	1982	1983	1984	1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
RECR. - DEV.	6.28 (68.26087)	6.62	6.89	7.17	7.44	7.92	8.40	9.69	10.72
Recr. - Disp.	0.12 (0.231214)	0.12	0.12	0.12	0.13	0.13	0.13	0.14	0.16
Trails	0.06 (0.0046296)	0.06	0.06	0.05	0.05	0.06	0.05	0.05	0.05
Wild. & Fish Habitat	0.34 (0.164251)	0.36	0.36	0.36	0.32	0.27	0.21	0.14	0.14
Anad. Fish Imp.	0.01 (0.003636)	0.01	0.04	0.09	0.23	0.50	0.52	0.52	0.52
Range	0.31 (0.77500)	0.32	0.32	0.33	0.33	0.33	0.33	0.33	0.34
Tmbr. Sales Offered	39.54 (1.38252)	40.37	41.06	45.62	46.87	48.11	51.29	51.29	51.29
Reforest	1.19 (0.0021875)	1.21	1.23	1.23	1.23	1.33	1.44	1.44	1.44
T.S.I.	0.05 (0.0000568)	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06
Water	1.59 (0.0005149)	1.59	1.59	1.60	1.61	1.62	1.62	1.62	1.62
Minerals	0.14 (0.004667)	0.14	0.14	0.15	0.16	0.17	0.19	0.20	0.21
H. & C.D.	1.24 (0.77500)	1.24	1.24	1.24	0.08	0.08	0.08	0.08	0.08
Protection	17.27 (0.04797)	16.41	16.84	16.84	14.68	15.11	14.25	12.09	12.52
Lands	1.19 (0.001556)	0.93	0.79	0.79	0.79	0	0	0	0
Soils	0.21 (0.002778)	0.21	0.22	0.26	0.20	0.22	0.23	0.23	0.23
Roads	2.86 (4.76667)	3.29	3.29	3.72	3.72	6.01	5.01	5.01	2.72
Total	72.4	72.93	74.24	79.62	77.89	81.92	83.81	82.89	82.10
% Change	0	+0.73	+2.54	+9.97	+7.58	+13.15	+15.76	+14.49	+13.40
Total For. Cost									

SIX RIVERS FOREST
ALL DISTRICT PROJECTED TARGETS

PROJECTED FTE's WEIGHTED BY TYPE OF WORK.

OUTPUT	1982	1983	1984	1985	1986–1990	1991–2000	2001–2010	2011–2020	2021–2030
Recr. - Dev.	7.84 (46.11765)	8.30	8.76	9.22	9.22	10.15	9.68	12.45	13.84
Recr. - Disp.	0.23 (0.76667)	0.23	0.25	0.24	0.26	0.28	0.29	0.31	0.35
Trails	0.14 (0.010769)	0.14	0.14	0.12	0.13	0.14	0.11	0.11	0.12
Wild. & Fish Habitat	4.80 (0.588235)	5.05	5.05	5.05	4.48	3.83	2.98	1.94	1.92
Anad. Fish Imp.	0.05 (0.01250)	0.05	0.20	0.49	1.31	2.81	3.00	3.00	3.00
Range	0.74 (0.0740)	0.75	0.75	0.76	0.76	0.78	0.78	0.79	0.81
Tmbr. Sales Offered	362.65 (2.26656)	385.32	401.18	452.18	519.04	580.24	619.00	619.00	619.00
Reforest	13.28 (0.003323)	13.51	13.74	13.74	13.74	14.72	16.03	16.03	16.03
T.S.I.	7.61 (0.00222)	7.61	7.50	7.72	8.28	8.44	8.44	8.44	8.44
Water	3.00 (0.000612)	3.00	3.01	3.02	3.03	3.06	3.06	3.06	3.06
Minerals	0.41 (0.007885)	0.41	0.43	0.44	0.47	0.50	0.55	0.59	0.60
H. & C.D.	0.05 (0.00100)	0.05	0.05	0.05	0.01	0.01	0.01	0.01	0.01
Protection	47.35 (0.010761)	45.20	46.27	45.20	37.66	38.74	36.59	33.36	33.36
Lands	3.73 0	0	0	0	0	0	0	0	0
Soils	2.26 (0.0055122)	2.26	2.37	2.92	2.15	2.37	2.37	2.43	2.43
Roads	6.96 (0.386667)	8.12	8.12	9.28	9.67	16.24	11.99	11.99	7.35
Total	461.1	480.00	497.82	550.43	610.21	682.31	714.88	713.51	710.32
% Change	0	+4.10	+7.96	+19.37	+32.34	+47.97	+55.03	+54.74	+54.05
Total For. Cost									

SIX RIVERS FOREST
LOWER TRINITY DISTRICT PROJECTED TARGETS

PROJECTED FTE's WEIGHTED BY TYPE OF WORK.

OUTPUT	1982	1983	1984	1985	1986–1990	1991–2000	2001–2010	2011–2020	2021–2030
Recr. - Dev.	1.20 (23.5294)	1.27	1.34	1.41	1.41	1.55	1.48	1.91	2.12
Recr. - Disp.	0.04 (0.833333)	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.06
Trails	0.02 (0.022222)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Wild. & Fish Habitat	0.73 (0.470968)	0.77	0.77	0.77	0.68	0.58	0.45	0.30	0.29
Anad. Fish Imp.	0.01 (0.0089286)	0.01	0.04	0.10	0.26	0.56	0.60	0.60	0.60
Range	0.11 (0.06875)	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12
Tmbr. Sales Offered	55.53 (1.119556)	59.00	61.46	69.19	79.49	88.89	94.83	94.83	94.83
Reforest	2.03 (0.0021168)	2.07	2.10	2.10	2.10	2.25	2.45	2.45	2.45
T.S.I.	1.16 (0.0021168)	1.16	1.14	1.18	1.26	1.29	1.29	1.29	1.29
Water	0.46 (0.000552)	0.46	0.46	0.46	0.46	0.47	0.47	0.47	0.47
Minerals	0.06 (0.0030)	0.06	0.06	0.06	0.07	0.07	0.08	0.09	0.09
H. & C.D.	0.01 (0.000645)	0.01	0.01	0.01	0	0	0	0	0
Protection	7.25 (0.005149)	6.92	7.09	6.92	5.77	5.93	5.60	5.11	5.11
Lands	0.57 0	0	0	0	0	0	0	0	0
Soils	0.35 (0.004493)	0.35	0.37	0.45	0.33	0.37	0.37	0.38	0.38
Roads	1.07 (0.297222)	1.25	1.25	1.43	1.49	2.50	1.84	1.84	1.13
Total	70.6	73.50	76.26	84.25	93.49	104.65	109.65	109.46	108.96
% Change	0	+4.11	+8.02	+19.33	+32.42	+48.23	+55.31	+55.04	+54.33
Total For. Cost									

SIX RIVERS FOREST
MAD RIVER DISTRICT PROJECTED TARGETS

PROJECTED FTE's WEIGHTED BY TYPE OF WORK.

OUTPUT	1982	1983	1984	1985	1986–1990	1991–2000	2001–2010	2011–2020	2021–2030
Recr. – Dev.	0.99 (110.000)	0.99	1.10	1.10	1.10	1.21	1.21	1.54	1.65
Recr. – Disp.	0.03 (1.666667)	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05
Trails	0.02 (0.002857)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Wild. & Fish Habitat	0.60 (0.306122)	0.63	0.63	0.63	0.57	0.48	0.37	0.24	0.24
Anad. Fish Imp.	0.01 (0.01250)	0.01	0.04	0.10	0.28	0.59	0.63	0.63	0.63
Range	0.09 (0.0107143)	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10
Tmbr. Sales Offered	45.69 (1.241576)	48.55	50.53	56.99	65.43	73.13	77.97	77.97	77.97
Reforest	1.67 (0.0018999)	1.70	1.73	1.73	1.73	1.85	2.02	2.02	2.02
T.S.I.	0.96 (0.0013994)	0.96	0.95	0.97	1.04	1.06	1.06	1.06	1.06
Water	0.38 (0.000267)	0.38	0.38	0.38	0.38	0.39	1.39	0.39	0.39
Minerals	0.05 (0.002083)	0.05	0.05	0.05	0.06	0.06	0.07	0.07	0.07
H. & C.D.	0.01 (0.006667)	0.01	0.01	0.01	0	0	0	0	0
Protection	5.97 (0.006167)	5.70	5.83	5.70	4.75	4.88	4.61	4.21	4.21
Lands	0.47 0	0	0	0	0	0	0	0	0
Soils	0.28 (0.0028455)	0.28	0.29	0.36	0.27	0.29	0.29	0.30	0.30
Roads	0.88 (0.151724)	1.02	1.02	1.17	1.21	2.03	1.50	1.50	0.93
Total	58.1	60.42	62.70	69.33	76.96	86.12	90.28	90.09	89.64
% Change	0	+3.96	+7.92	+19.33	+32.46	+48.23	+55.39	+55.06	+54.29
TOTAL FOR. COST									

BUILDINGS AND UTILITIES MAINTENANCE AND CONSTRUCTION PROGRAM

2/79

A. REGIONAL OBJECTIVES-LONG RANGE

1. Existing Facilities-Complete All Inventoried Backlog Needed To Support 1980 RPA Program → FY 19~~84~~85
2. Additions Or New Facilities-Complete All Facilities Needed To Support 1980 RPA Program → FY 1985

B. TIME FRAME AND CRITICAL CHECK POINTS NEEDED TO MEET REGIONAL OBJECTIVES

FISCAL YEAR	74	75	76	77	78	79	80	81	82	83	84	85	86
YEAR NO.	0	0	1	2	3	4	5	6	7	8	9	10	END

FORESTS

1. Complete Condition Surveys (74-85)
2. Implement Manual Direction (74-85)
3. Preliminary Plan For Existing (78)
4. Final Plan For Existing (79)
5. Update Plan For Existing Facilities (As Needed)
6. Preliminary Plan For Additions or New (78)
7. Final Plan For Additions or New (79)
8. Update Plan For Additions or New (As Needed)
9. Complete Administrative Site Needs Plan Including Facilities And Funding Approach (79)
10. Prepare Projects Feasibility & Economic Studies (74-82)
11. Provide Training (74-85)
12. Provide Skills Assessments (78 and 80)
13. Program Reviews (74-85)
14. Provide Annual Progress Report (74-85)

REGIONAL OFFICE

1. Assist in Completing Condition Surveys (74-85)
2. Provide Manual Supplements (76)
3. Review Preliminary Plan-Existing (78)
4. Review Final Plan-Existing (79)
5. Determine Need For Plan Update On Existing (79)
6. Review Preliminary Plan-Additions or New (78)
7. Review Final Plan-Additions or New (79)
8. Determine Need For Plan Update or Additions or New
9. Review Administrative Site Needs Plan Including Facilities and Funding Approach (79)
10. Review Projects Feasibility & Economic Studies (74-82)
11. Provide Training (74-85)
12. Provide Skills Assessments (78 and 80)
13. Program Reviews (74-85)
14. Annual Assessment of Progress on Total Program (74-85)

C. RESULTS

Key items that control successful results are:

1. Continuous support from Regional Forester and Forest Supervisors Includes establishing objectives, using accountability measures for accomplishment on critical check points, annual review of progress on critical check points, programming funding needs at appropriate level based on Forests Plans and emphasizing needs to Washington Office.

2. Continuous Coordination and Understanding Between Programming and Technical Staffs. (Both Forest and Regional Office)

   At least an annual review and assessment of progress on the following items by both Forest and Regional Office technical and programming staffs:

   1. Condition surveys - requires standardizing forms and procedures, providing training and skills to complete surveys and correct deficiencies, continuous updating, using data to set priorities, schedule needs and assist in correcting deficiencies.

   2. Program data - requires including as part of condition surveys or feasibility/economic studies, provide training and skills, maintain standard and minimum information, using data to schedule needs and making program decisions.

   3. Feasibility/economic studies - requires standardizing, providing training and skills to complete studies using data to schedule needs and making program decisions and assisting in design needs.

   4. Administrative site needs - requires coordinating with RPA targets and position management needs, determining funding alternatives.

   5. Joint program reviews by both technical and programming staffs. Includes an evaluation of the condition surveys, quality of correcting deficiencies, feasibility/economic studies, site study needs including facilities and funding approach and overall progress of accomplishment.

NEEDED MAINTENANCE REVIEW - 5 YEARS (FROM R5-1300-30 DATED 3/80)
(M DOLLARS)

FOREST	TOTAL NO. BLDGS.	NO CONDEMNABLE	% OF TOTAL	AV. ANN. 1% OF PRES. VALUE X 5 YRS. =	FIVE YEAR TOTAL	FIVE YEAR INVENTORIED TOTAL	FIVE YEAR INVENTORIED TOTAL	5 YR. TOTAL	5 YR. COST/ BLDG.	* 5 YR. AV. ANN. % OF CUR. VALUE	% OF REG. TOTAL (5 YR. TOTAL)
ANGELES	249	13	5.2	174.0	870.0	676.0	2789.0	4335.0	17.41	4.98	6.6
CLEVELAND	128	32	25.0	49.2	246.0	917.5	3.0	1166.5	9.11	4.75	1.8
ELDORADO	129	3	2.3	86.1	430.5	334.6	1.6	766.7	5.94	1.78	1.2
INYO	88	3	3.4	53.4	267.0	579.6	340.0	1186.6	13.48	4.44	1.8
KLAMATH	202	16	7.9	102.0	510.0	3894.0	2625.0	7029.0	34.80	13.78	10.8
LASSEN	92	-0-	-0-	60.1	300.5	2021.4	125.0	2446.9	26.60	8.14	3.8
LOS PADRES	195	19	9.7	83.0	415.0	6682.0	2339.0	9436.0	48.39	22.74	14.5
MENDOCINO	123	3	2.4	63.3	316.5	732.0		1048.5	8.52	3.31	1.6
MODOC	88	2	2.3	29.9	149.5	527.4	77.5	754.4	8.57	5.05	1.2
SIX RIVERS	84	6	7.1	145.0	725.0	414.0	55.0	1194.0	14.21	1.65	1.8
PLUMAS	113	4	3.5	87.4	437.0	2571.3	269.6	3277.9	29.01	7.50	5.0
SAN BERNARDINO	175	33	18.8	125.8	629.0	4254.0	13,615.6	18,498.6	105.71	29.41	28.4
SEQUOIA	146	37	25.3	293.0	1465.0	232.0	21.0	1718.0	11.77	1.17	2.6
SHASTA-TRINITY	268	12	4.5	187.0	935.0	3144.0	415.0	4494.0	16.77	4.81	6.9
SIERRA	183	16	8.7	58.0	290.0	2275.0	202.0	2767.0	15.12	9.54	4.2
STANISLAUS	93	3	3.2	50.0	250.0	1775.0	53.0	2078.0	22.34	8.31	3.2
TAHOE	166	11	6.6	46.0	230.0	691.0	576.0	149.70	9.02	6.51	2.3
LTBMU	37	4	10.8	16.4	82.0	918.3	523.4	1523.7	41.18	18.58	2.3
TOTALS/REG. AV.	2559	217	8.5	1,709.6	8,548.0	32,639.1	24,030.7	65,217.8	25.49	7.63	100.0

$$*\text{Col. \#11} = \frac{\frac{\text{Col. 9}}{\text{5 - yrs.}}}{\text{Col. 5} \times 100} \text{ X } 100$$

Appendix 14

MILITARY PAY
Examples

The following pay and allowances for military personnel is in addition to the basic pay they receive for their grade and in addition to any Cost of Living Allowances (COLA's) for being in a high cost area such as Honolulu, Hi.

TYPES of PAY	OTHER ALLOWANCES
Sea Pay	Basic Allowance for Quarters (BAQ)
Sub Pay	Basic Allowance for Subsistence
Hostile Fire Pay	Variable Housing Allowance-Maximum increase of 55% of BAQ-BASED on where you live.
Hazardous Duty Pay	Reinlistment Bonuses (up to $15,000)
Flight Pay	
Petty Officer Pay (Marines & Army)	
Professaional Pay (Pro-Pay) This is a special Billet Pay (like our Shortage Category pay at top of grade).	

Appendix 15

HOUSING STUDY CONTACT LIST

PERSON	UNIT	NATURE OF CONTACT
Jerry Wooten & John Grosvenor	R.O. Engeneering	Review of Recommendations FA & O Program Processings, Historical and current John Program Proposals.
Jim Rathbun	Dep.F.S., Klamath	Discuss Proposed Study
Doug. MacWilliams	Forest Supervisor, Klamath	Discuss Proposed Study
Bob Ground & Bob Sullivan	R.O., Program Planing & Budgeting	Function of Multi-Functional Group, FA & O Processes and Workload forcasting.
John Ronald, Bob Erwin,	R.O. S. & P.F.	Discussion of possible projects that might affect & Randy Godden workload of Study Arena Units
Temple Hahn	W.O., A.M. Staff.	National impacts of study and FA & O discussions
Karl Becker	F. & A.M. (R.O.)	Discuss methods to project workloads on districts (Sub-Units)
Bill Palmer	R.O. - PP & B Staff	RPA discussion and documents.
Hatch Graham	R.O. - LMP Staff	Regional Plan and Disaggregation of RPA Targets to Forests.
Ike Parker	R.O. - LMP Staff	Discussion of Problems of Disaggregation of RPA Targets.
Janet Jarmen	Pers-Staff-Mendocino	Distribution of F.T.E. to Dist.
Larry Miller	Pers. Staff-Shasta-Trinity	Distribution of F.T.E. to Dist.
Monty Montana	Pers. Staff-Six Rivers	Distribution of F.T.E. to Dist.
Leon Bennett	Pers. Staff-Klamath	Distribution of F.T.E. to Dist.
Owen Peck	Six Rivers-Plan. Staff	Disaggregation of Forest RPA Targets to Districts
Bill Breswick	S-T, LMP Staff	Distribution of F.T.E. to Dist.
Doug Lunde	R.O. H.R.P.	Advent Process Relative to Establishing Projected Workloads for Districts in Study Area.
Jim Turner	Shasta-Trinity, PP & B.	
Tom Gralin	Six Rivers, PP & B	
Donna Clark	Klamath, PP & B	
Andy Taylor	Mendocino, PP & B	

Kathy Clement	R.O., R.P.A. Coord. R.P.A.	50 Year Program Projections,
Bob Patchin & Bob Healy	R.O., PP & B Staff	Advent Processes Review of Recommendations.
Nelson Hernandez	R.O. Engineering Energy Coord.	Energy Systems in Remote Locations
Mike Skinner	R.O. Economist	Population Data From 1980 Census.
Mack Moore	R.O. Mgt. Development Spec.	Review and Comment of Study Recommendations.
Lou Romero	R.O. Placement Officer	
Don Redman	R.O. P.M. Work Force Planner	
Don Leaverton	R.O. Regional Safety Officer	
Mike Duffy	R.O. S.D. F & AM	
Fob King	R.O. P.M. Pay Spec.	

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1981 Housing Study, North Coast Area, Pacific Southwest Region, Forest Service.

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